

**Figure 1- figure Supplement 1\_Related to Figure 1. Approaches for morphodynamic analyses of ovule primordium development using a reference set of 3D segmented images.**

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(A) OvuleViz, an interactive interface enabling the analysis of segmented data based on exported cell statistics. The different snapshots display several features of OvuleViz, enabling the generation of plots from chosen cell statistics for chosen ovule primordium stage, genotype, cell labels or groups thereof (viewpoints).

(B) Examples of plot types that can be generated by OvuleViz.

(C) Possibility to export all or a subset of data as summary table or raw dataframe for further analyses external to OvuleViz.

(D) PCA of cell descriptors from the wild-type reference dataset (*Arabidopsis* Col-0) (see [Figure 1- Source Data 1](#)), for all cell types and all stages. PCA was performed on a dataset containing Sphericity, Ellipticity oblate, Ellipticity prolate, Area, and Volume. Only the first and the second Principal Components (PCs) are shown. The loading plot and table indicate the variables' contribution to each component.

(E) Same as (D) for all cell types grouped by stage: stage 0 (0-I; 0-II), stage 1 (1-I; 1-II), and stage 2 (2-I; 2-II). Variables' contributions are presented by loading plots for each PC and summary table.