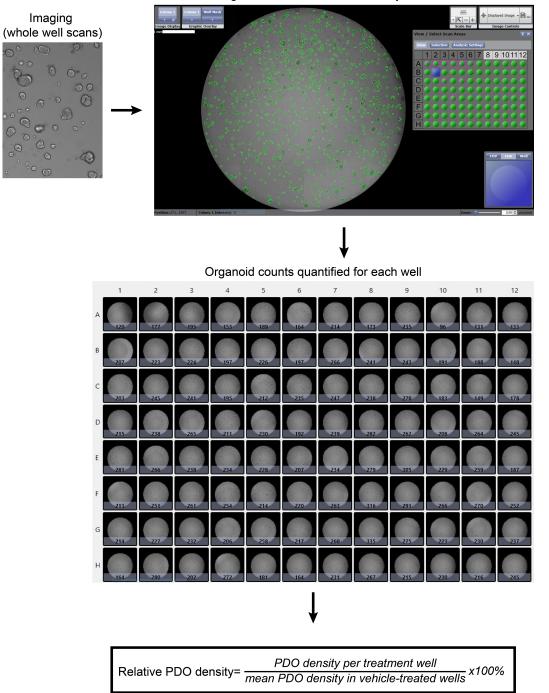
## **Supplemental figures**

### Supplementary Figure 1



Organoid outlines are identified by the software

**Supplementary Figure 1:** Schematic of PDO density quantification using Celigo Image Cytometer Software.

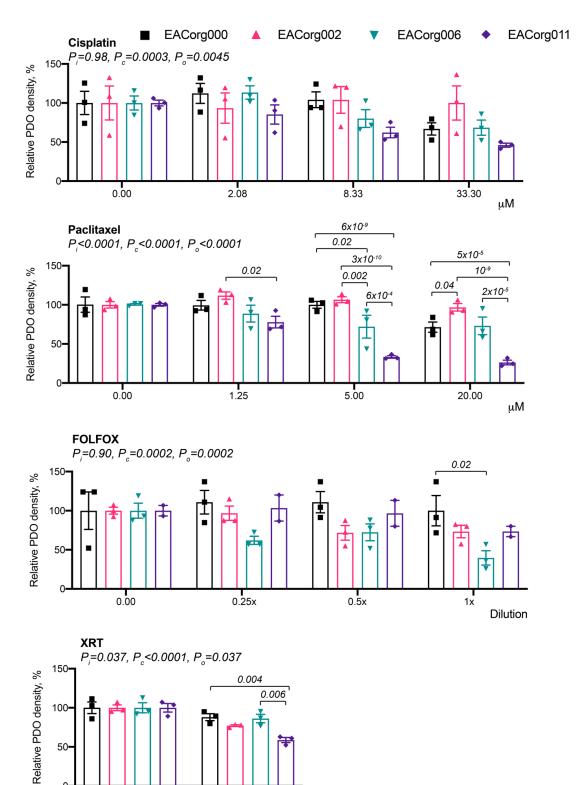
## Supplementary Figure 2

0-

0

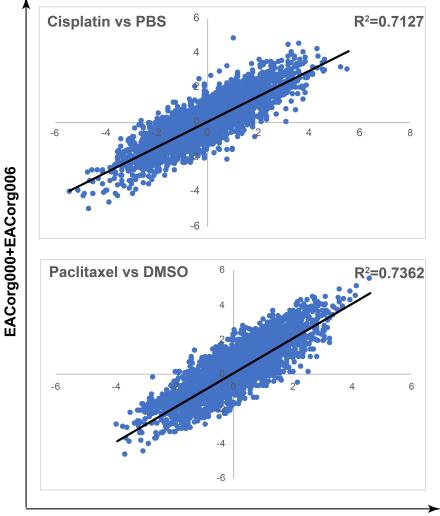
5

Gy



Supplementary Figure 2: EAC PDOs serve as avatars for patients' responses to therapy. Relative PDO density in response to components of standard of care and alternative treatment. 2-way ANOVA parameters:  $P_i$ =significance of interaction (differential response of organoid lines),  $P_c$ =significance of concentration/dose,  $P_o$ =significance of organoid line. Error bars = SEM, significant P-values for multiple comparisons are listed on the graphs.

# Supplementary Figure 3

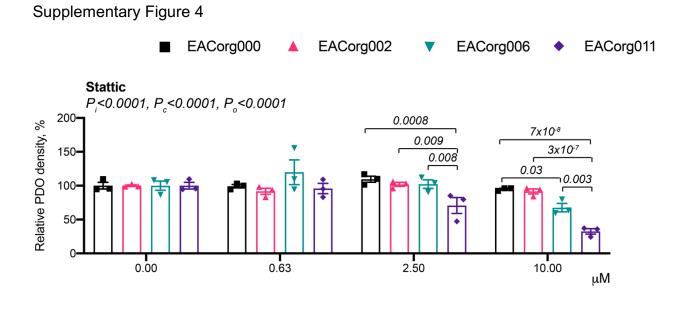


EACorg000+EACorg006+EACorg011

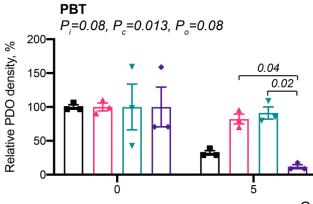
## Supplementary Figure 3: Introduction of EACorg011 does not substantially alter

the DEG lists. DEG lists obtained by analyzing datasets comprised by

EACorg000+EACorg006+EACorg001 were plotted against the DEG lists obtained by analyzing the EACorg000+EACorg006 datasets. R<sup>2</sup> values for linear relationship displayed on the graphs.



**Trametinib**  $P_i = 0.0001, P_c < 0.0001, P_o = 0.0067$ 4x10⁴ 0.05 150 Relative PDO density, % 0.03 ₽ 10-5 ŧ t 100 ▼ + 50 0 0.00 0.63 10.00 2.50 nM



Gy

### Supplementary Figure 4: EAC PDOs respond differentially to experimental

**therapeutics.** Relative PDO density in response to components of standard of care and alternative treatment. 2-way ANOVA parameters:  $P_i$ =significance of interaction (differential response of organoid lines),  $P_c$ =significance of concentration/dose,  $P_o$ =significance of organoid line. Error bars = SEM, significant P-values for multiple comparisons are listed on the graphs.