Supplementary Information

Dynamics of clonal dominance in growing cell networks

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Supplementary Table 1. *Fly stocks used, their source, and figures and videos in which they appeared.*

Transgene name	Source	Relevant to
ubi>Pav::mCh[*]	from Dr. Emmanuel Derivery [1]	Figs. 1 and 2, E.D. Figs. 1 and 4, Supp. Videos 1 and 6
PCNA::GFP[**]	from Dr. Eric Wieschaus (Shvartsman lab stock at Princeton)	E.D. Figs. 1 and 4, Supp. Video 6
Resille::GFP	Shvartsman lab stock	Supp. Video 6
Resille::GFP/Cyo; pav::mCh/Tm3 sb	generated for this study	Supp. Video 6
Resille::GFP/Cyo; PCNA::GFP/pav::mCh	generated for this study[***]	Supp. Video 6
w; Ecad:GFP	Shvartsman and Martin lab stocks[*****]	E.D. Figs. 1 and 4
w; sqh::GFP	Martin lab stock	E.D. Fig. 1
w; Gap43:mCh; Jupiter:GFP	Martin lab stock	Supp. Video 2
TJ-Gal4	Martin lab stock	Supp. Video 3
Fly-FUCCI[****]	BDSC[******] #55100	Supp. Video 3

[*] *Pav* is a kinesin-like protein and is a component of stalled cytokinetic furrows [1, 2].
[**] *PCNA* is nuclear and exhibits characteristic cell cycle-dependent changes in intensity and pattern [3].
[***] Standard genetic techniques were utilized to genetically move together these tagged proteins; since *Resille::GFP* and *PCNA::GFP* localize to different cellular compartments, they can be differentiated.
[****] Fly-FUCCI expressing *E2f* and *CycB* degron-tagged GFP and mRFP, respectively, under UASp control.
[*****] Adam Martin Lab at the MIT Department of Biology
[******] BDSC: Bloomington *Drosophila* Stock Center.

Supplementary Table 2. *Experimental initial conditions for number of clusters and corresponding sizes*.

Egg chamber (EC)	Cluster size distribution
EC1	4, 4, 4, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC2	5, 5, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC3	8, 4, 4, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC4	5, 4, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC5	6, 4, 3, 3, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC6	7, 3, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1
EC7	6, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1
EC8	4, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1
EC9	8, 5, 5, 4, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC10	4, 4, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC11	7, 4, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1

Supplementary Table 3. *Experimental cluster sizes for egg chambers with >600 cells.*

Egg chamber (EC)	Cluster size distribution
EC1L	323, 153, 90, 60, 59, 26, 25, 22, 21, 17, 15, 11, 11, 9, 9, 9, 7, 6, 6, 6, 5, 5, 5, 4, 4, 3, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC2L	350, 346, 36, 36, 18, 17, 17, 13, 10, 10, 10, 9, 8, 8, 6, 3, 3, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC3L	265, 198, 79, 75, 31, 30, 28, 26, 20, 20, 20, 16, 15, 9, 7, 7, 5, 4, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC4L	432, 97, 77, 63, 60, 48, 28, 13, 11, 7, 7, 5, 5, 4, 4, 3, 3, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC5L	318, 137, 88, 53, 33, 32, 32, 32, 24, 20, 11, 10, 8, 7, 6, 4, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC6L	246, 151, 49, 45, 38, 30, 25, 24, 23, 13, 11, 10, 9, 9, 7, 7, 6, 6, 5, 4, 3, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
EC7L	227, 115, 74, 61, 46, 16, 10, 8, 7, 6, 6, 5, 5, 4, 4, 4, 4, 4, 4, 3, 3, 3, 3, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1

[1] Derivery, E. et al. Polarized endosome dynamics by spindle asymmetry during asymmetric cell division. *Nature* **528**, 280-285 (2015).

[2] Airoldi, S. J., McLean, P. F., Shimada, Y. & Cooley, L. Intercellular protein movement in syncytial *Drosophila* follicle cells. *J. Cell Sci*. **124**, 4077-4086 (2011).

[3] Zerjatke, T. et al. Quantitative cell cycle analysis based on an endogenous all-in-one reporter for cell tracking and classification. *Cell Rep*. **19**, 1953-1966 (2017).