

Supplemental Figure Legends

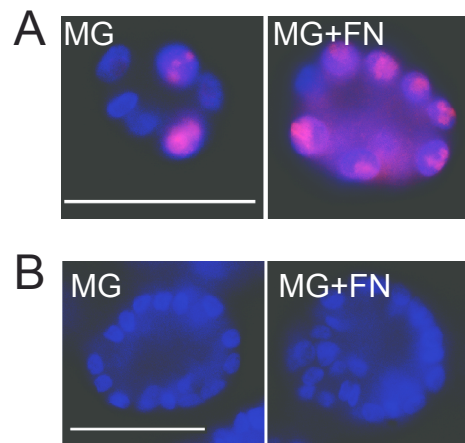
Supplementary Figure 1. Examples of images used to count total and Ki-67 positive cells. **(A)** Representative images of acini cultured for 5 days on Matrigel (MG) or Matrigel containing 50 $\mu\text{g/ml}$ rat fibronectin (MG+FN) before being fixed and stained with DAPI (blue) and antibodies against Ki-67 (red), a marker of proliferation. **(B)** Representative images of acini cultured for 12 days on Matrigel (MG) or Matrigel containing 25 $\mu\text{g/ml}$ rat fibronectin (MG+FN) followed by fixing and staining with DAPI. These and related images were used to count cells in the largest confocal cross-section of acini. The total number of cells was counted for A and B; the number of cells that stained with anti-Ki-67 antibody was also counted in A.

Supplementary Figure 2. Addition of fibronectin to established acini induces an increase in acinar cell number. Acini that had developed for 10 days were exposed to assay medium (red) or assay medium containing fibronectin (green). After the indicated number of days, samples were fixed and stained with DAPI and the total number of cells in the largest acinar cross-section was counted. Frequency data of acinar cell number across an entire population of acini at 2, 7, or 14 days after replacing medium are plotted as in Figure 2. Between 30 and 100 acini were examined per condition per time-point. Results are representative of 3 independent experiments.

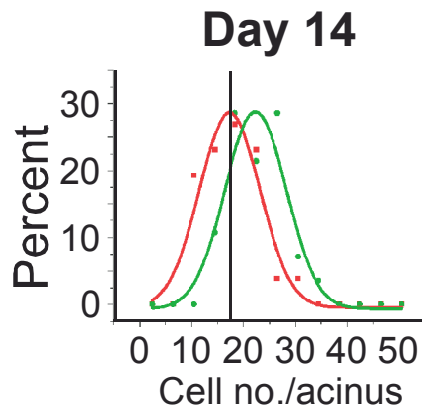
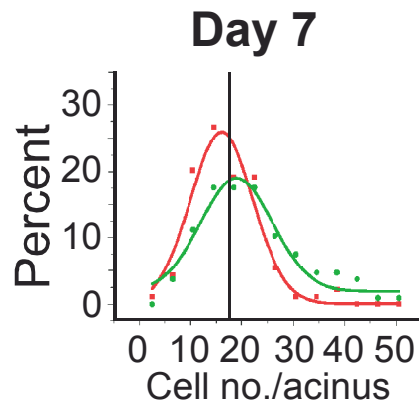
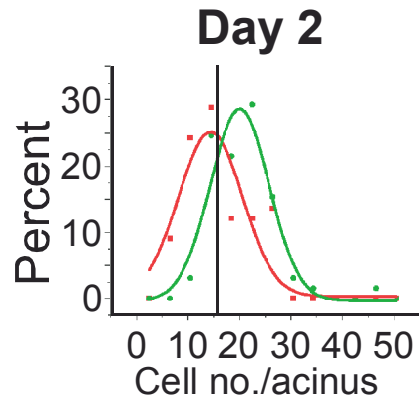
Supplementary Figure 3. Introduction of fibronectin into differentiated cultures impedes maintenance of acinar morphology. **(A)** Fibronectin was added to growth-arrested cultures for the indicated number of days and the percentage of DAPI-stained acini with hollow lumens was calculated. The graph shows the decrease in the percentage of acini with hollow lumens in the presence of fibronectin relative to Matrigel cultures. **(B)** Interior cells were counted in the

widest confocal cross-section of a population of acini. The percentage of interior cells relative to total was calculated and is presented as a change from the percentage of interior cells in Matrigel only control cultures. Between 30 and 100 acini were examined per condition. Graphs represent combined results of 3 independent experiments. * $p < 0.05$.

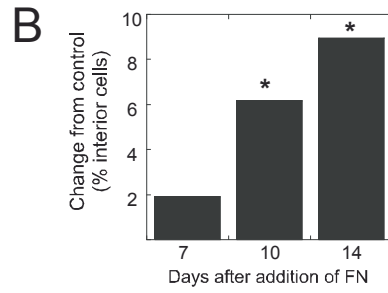
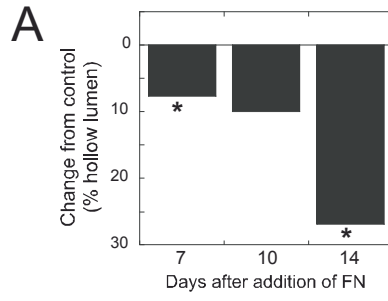
Supplementary Figure 4. A role for fibronectin in breast tumorigenesis. See text.



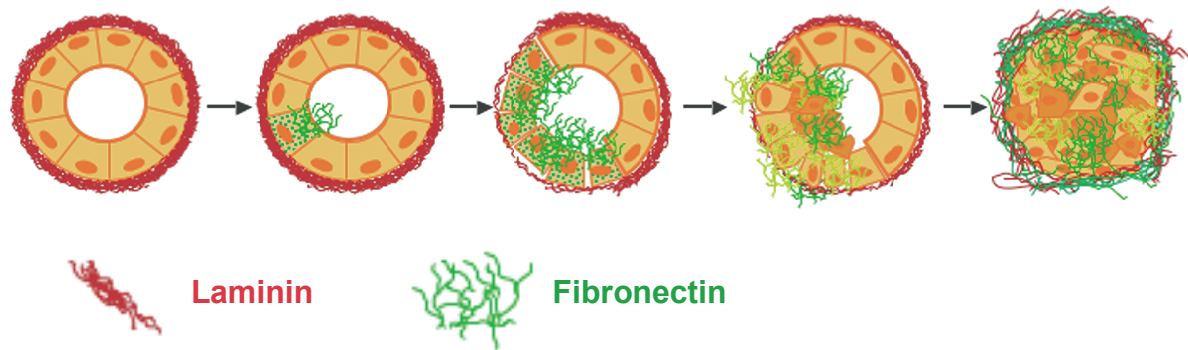
Supplemental Figure 1



Supplemental Figure 2



Supplemental Figure 3



Supplemental Figure 4