Supporting Information

Liu et al. 10.1073/pnas.1102808108

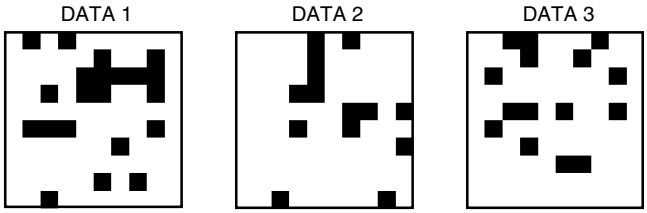


Fig. S1. Spatial distribution of empty Tepui tops (black) at the end of three experiment runs for the three LNCaP datasets shown in Fig. S5. No clear spatial correlations are observed.

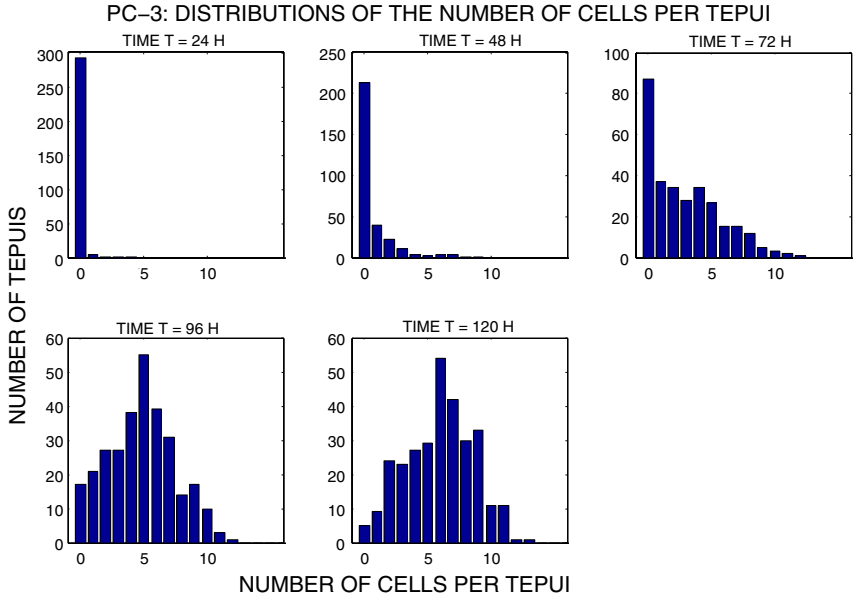


Fig. S2. Distributions of the number of PC-3 cells on each Tepui top at different time steps. A total of 300 Tepuis (from three 10 by 10 arrays) are included in the histograms. A pronounced peak around $N = 6$ is established at the steady state.

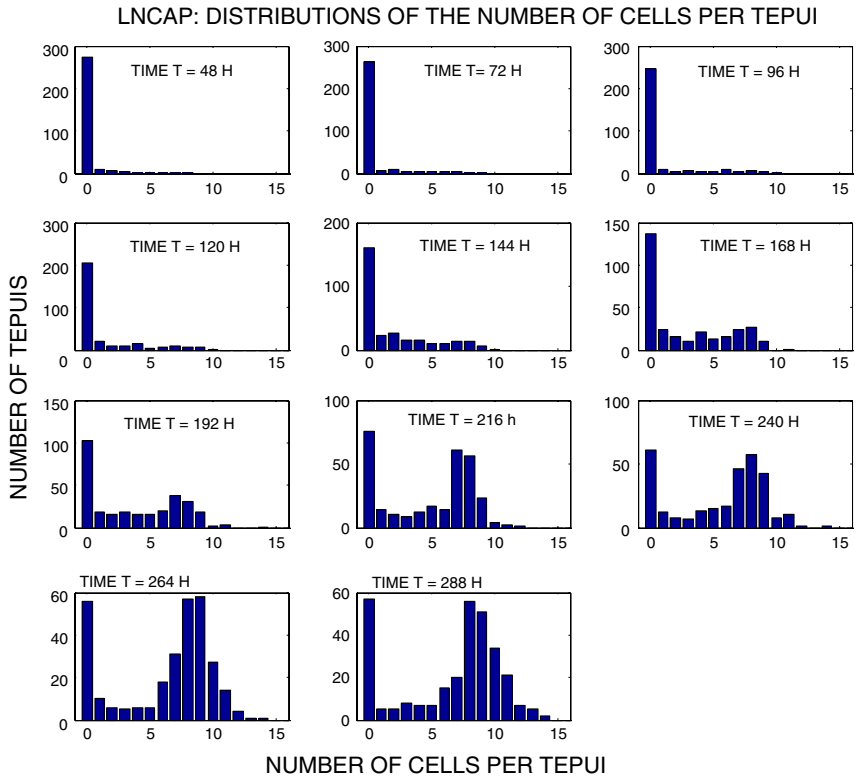


Fig. S3. Distributions of the number of LNCaP cells on each Tepui top at different time steps, a total of 300 Tepuis (from three 10 by 10 arrays) are included in the histograms. It is clearly seen how a double-peak structure evolves: one peak centered at $N = 8$, 9 cells and another sharp peak around $N = 0$ due to the unoccupied Tepui tops.

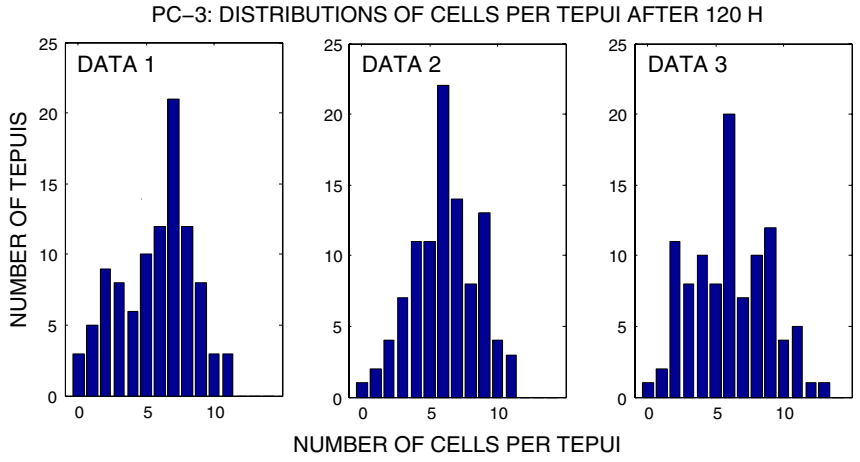


Fig. S4. The distribution of the number of PC-3 cells on each Tepui tops from three experiment runs. Each run consists of a 10 by 10 array of Tepuis and data obtained after 120 h.

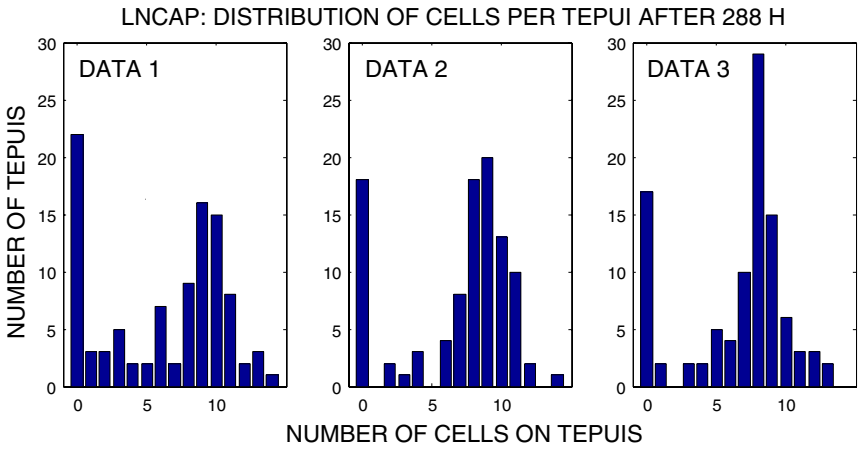


Fig. S5. The distribution of the number of LNCaP cells on each Tepui top from three experiment runs. Each run consists of a 10 by 10 array of Tepuis and data obtained after 288 h. It is clear that the double-peak structure is reproducible.

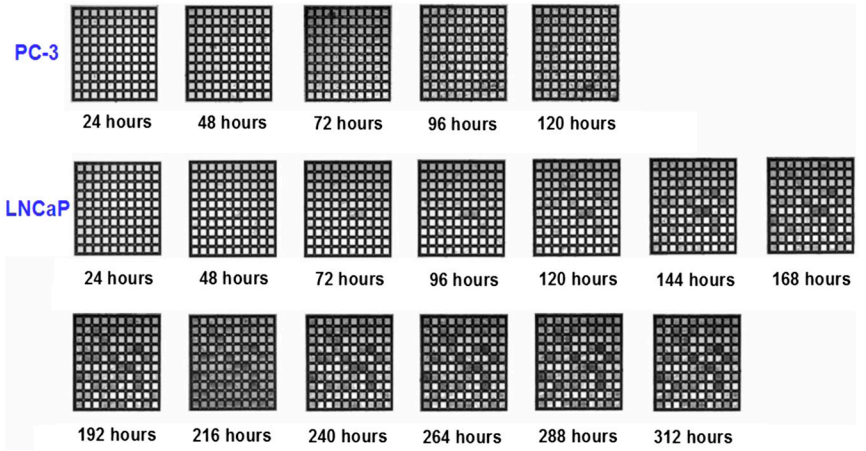
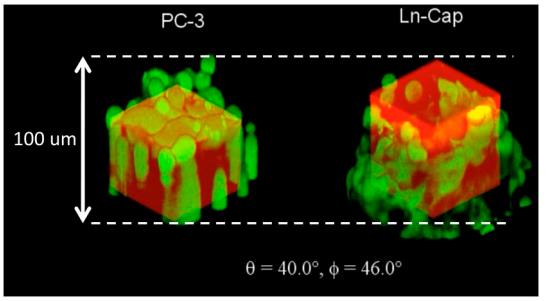
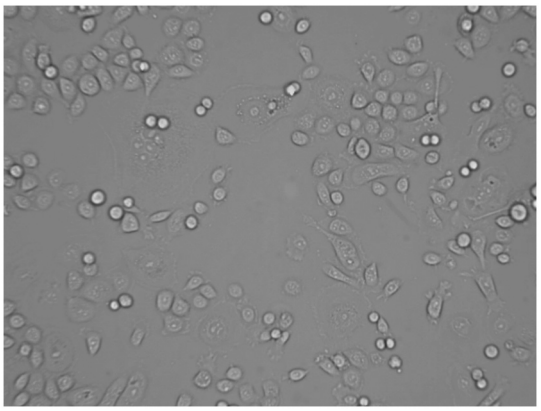


Fig. S6. Bright-field images of a typical experiment run on a 10 by 10 Tepui array. Images were taken every 24 h. PC-3 cells occupied all Tepui tops after 120 h, whereas LNCaP cells reached a steady state after 312 h, leaving about 15% of the Tepui tops unoccupied.



Movie S1. Three-dimensional reconstruction of GFP-tagged cells after reaching steady states in the microdevice. θ and ϕ are the viewing angles.
Movie S1 (AVI)



Movie S2. PC-3 cell proliferation on gelatin coated plane surface for a total of 48 h. Individual cells were tracked in the video, and the cell diffusion coefficient was estimated.

Movie S2 (AVI)