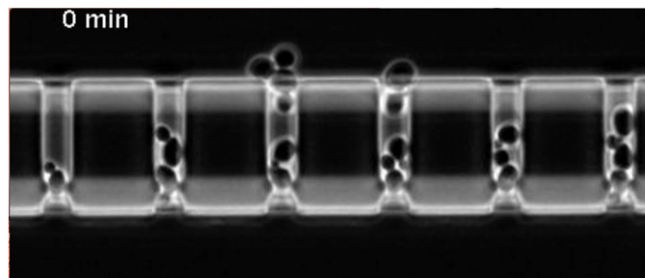


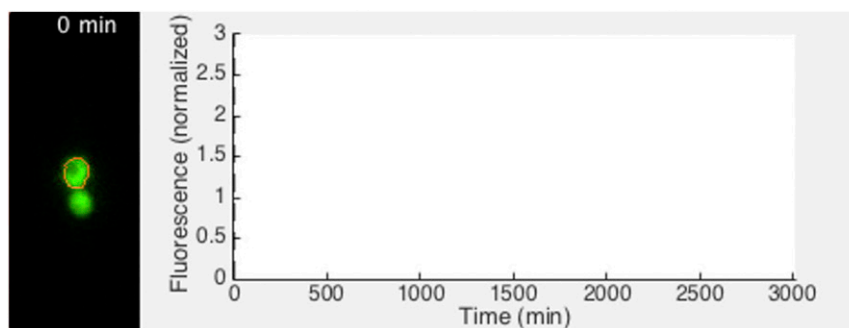
Supporting Information

Li et al. 10.1073/pnas.1703379114



Movie S1. Time-lapse movie tracking the replicative aging of individual yeast cells throughout their entire life spans. Mother cells were trapped at the bottom of finger-shaped chambers 1, 3, 4, 5, and 6 (from left to right) throughout their entire life spans, following each division until the mother's death. The original mother cell in chamber 2 was pushed out by its daughter cells in the middle of the experiment, and was therefore lost for further analysis. Mother cells in chambers 1, 3, 5, and 6 produced elongated daughters at the late phases of aging, preceding their deaths, whereas the mother cell in chamber 4 produced round daughters before its death.

[Movie S1](#)



Movie S2. Time-lapse movie showing multigenerational silencing waves of an aging mother cell. The movie on the left shows the fluorescence intensity changes during the aging process of a mother cell with the rDNA silencing reporter (encircled). (*Right*) Real-time quantification of fluorescence intensity, indicating the silencing state of rDNA: decreased fluorescence indicates enhanced silencing, whereas increased fluorescence indicates reduced silencing. Vertical dashed line represents each division time of the mother cell in which the distance between two adjacent dashed lines indicates the cell cycle length. In the movie, from 0 min to 1,050 min, the mother cell underwent budding toward the bottom of the finger-shaped chamber and newborn daughter cells were pushed out through the small opening at the bottom of the chamber. From 1,050 min to 3,015 min, the mother cell changed budding direction, producing daughter cells upward until its death. This movie shows that during the aging process, the mother cell exhibits waves of silencing loss, each of which spans multiple cell divisions.

[Movie S2](#)

Other Supporting Information Files

[SI Appendix \(PDF\)](#)