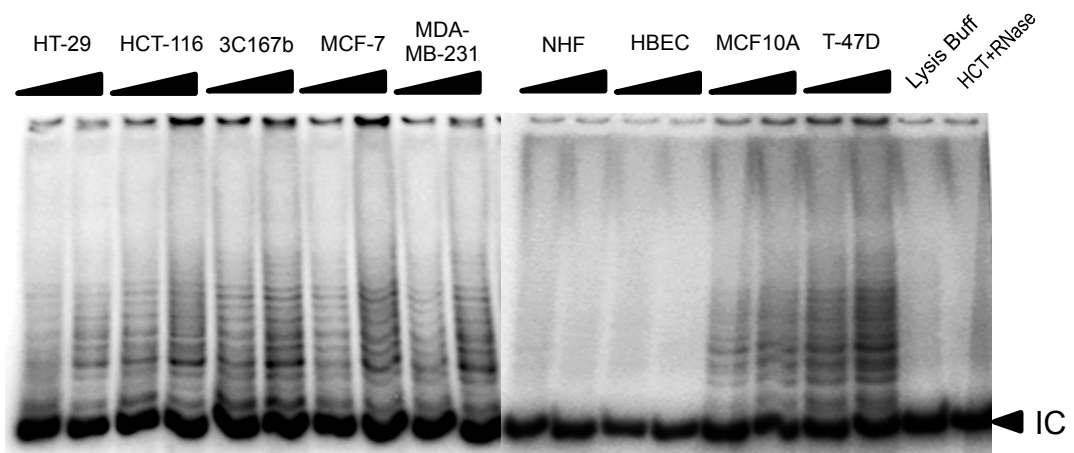
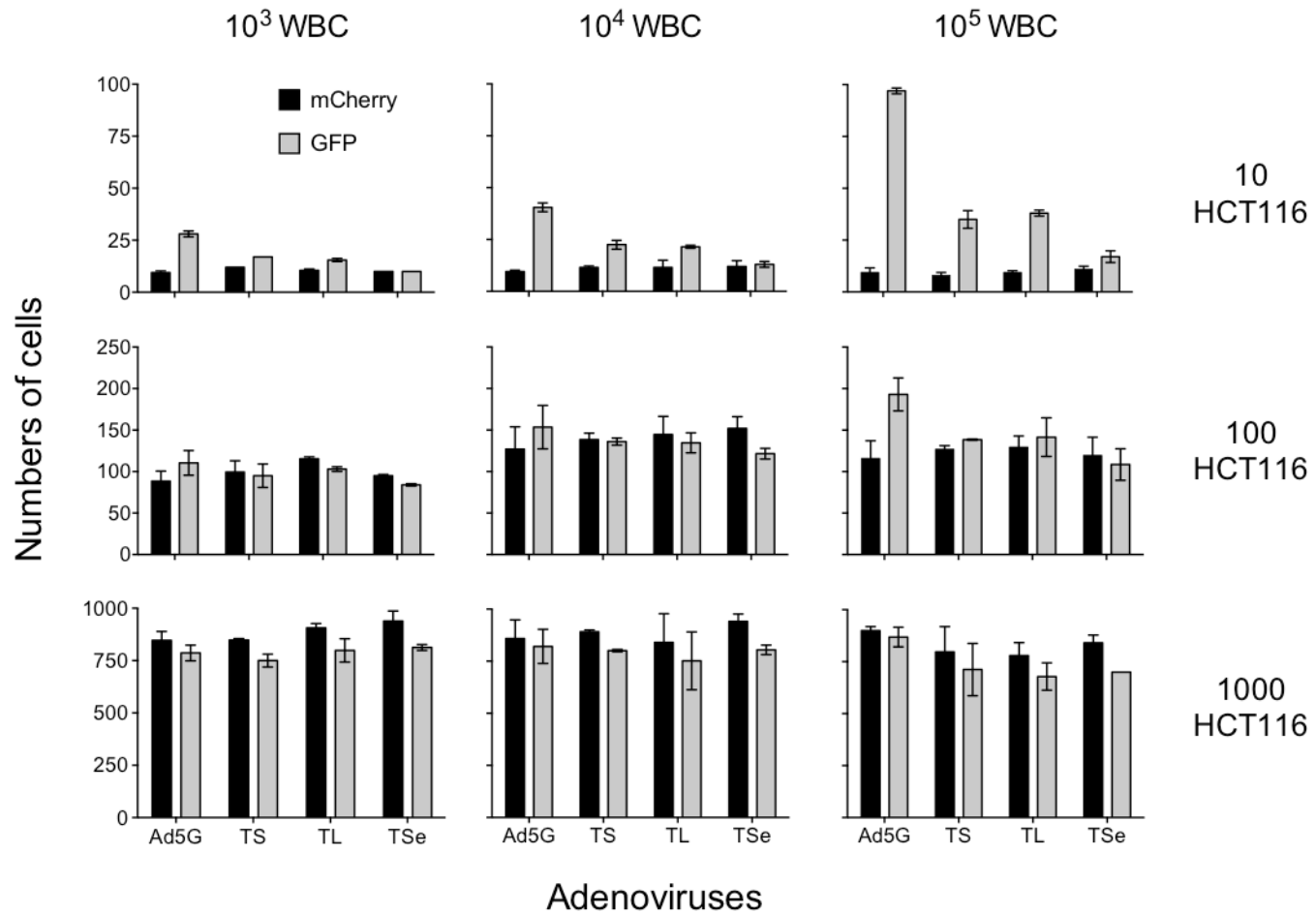


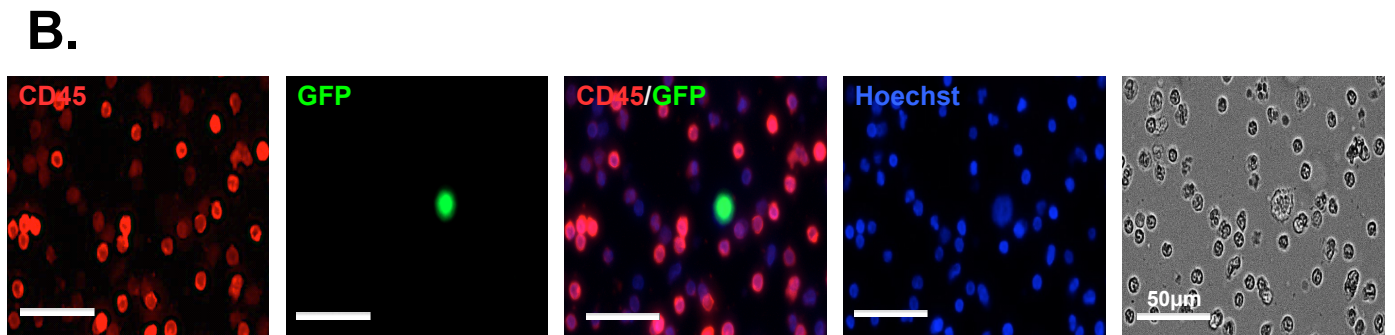
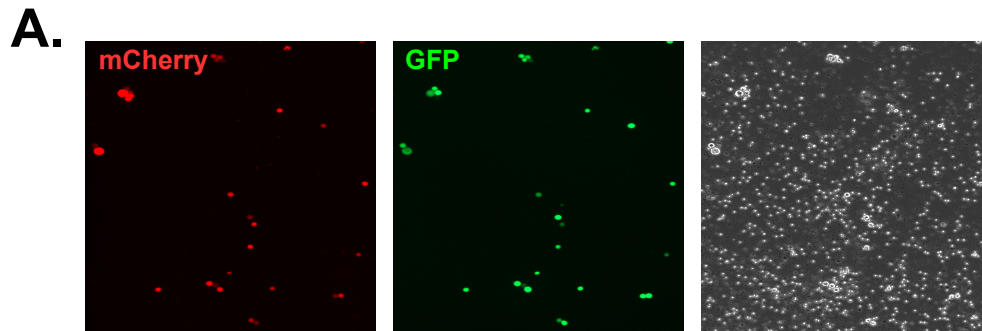
**Figure S1.** Replication of recombinant adenoviruses in MCF7 breast cancer cells. Cells labeled with the mCherry fluorescent protein were infected with recombinant adenoviruses at MOI 10 and imaged every 12 hours for fluorescence. Green, eGFP; Red, mCherry.



**Figure S2.** Telomerase expression in normal human cells and cancer cell lines. Telomerase activities were determined by TRAP assays. 50 and 500ng protein extracts were analyzed in each lane. IC, internal control.

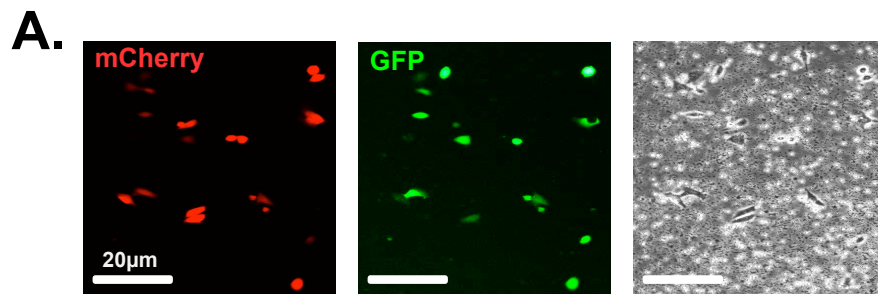


**Figure S3.** Labeling mixtures of HCT116 colon cancer cells and WBCs. About 10, 100, or 1000 mCherry+ HCT116 cells were mixed with WBCs in 100 $\mu$ l, infected with  $10^7$  pfu/ml of adenovirus and imaged after incubation at 37°C for 24h.

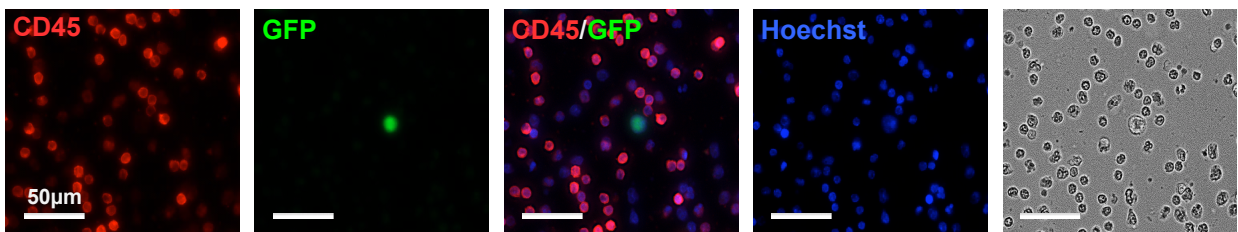


**Figure S4.** Imaging the mixture of HCT116 colon cancer cells and WBCs. **A.** Visualization of HCT116 cells. A mixture of 1000 mCherry+ HCT116 and  $10^5$  WBCs was infected with  $10^7$  pfu of Ad5GTSe virus in 1 ml of medium in individual wells of a non-tissue culture 24-well plate. Images were captured 24h after infection. **B.** Detection of WBCs by CD45 immunostaining. 1000 mCherry- HCT116 cells and  $10^5$  WBCs in 100 $\mu$ l were infected with  $10^7$  pfu/ml of Ad5GTSe and stained 24h later with an antibody against CD45. Nuclei were stained with Hoechst 33342.





**B.**



**Figure S5.** Imaging the mixture of MCF7 breast cancer cells and WBCs. **A.** Selective infection of MCF7 by Ad5GTSe. A mixture of 1000 mCherry+ MCF7 and  $10^5$  WBCs was infected with  $10^7$  pfu/ml Ad5GTSe in individual wells of a non-tissue culture 24-well plate and imaged 24h post infection. **B.** Detection of WBCs by CD45 immunostaining. A mixture of 1000 mCherry- MCF7 cells and  $10^5$  WBCs was infected with  $10^7$  pfu/ml Ad5GTSe. Immunostaining was performed as in Figure S3.