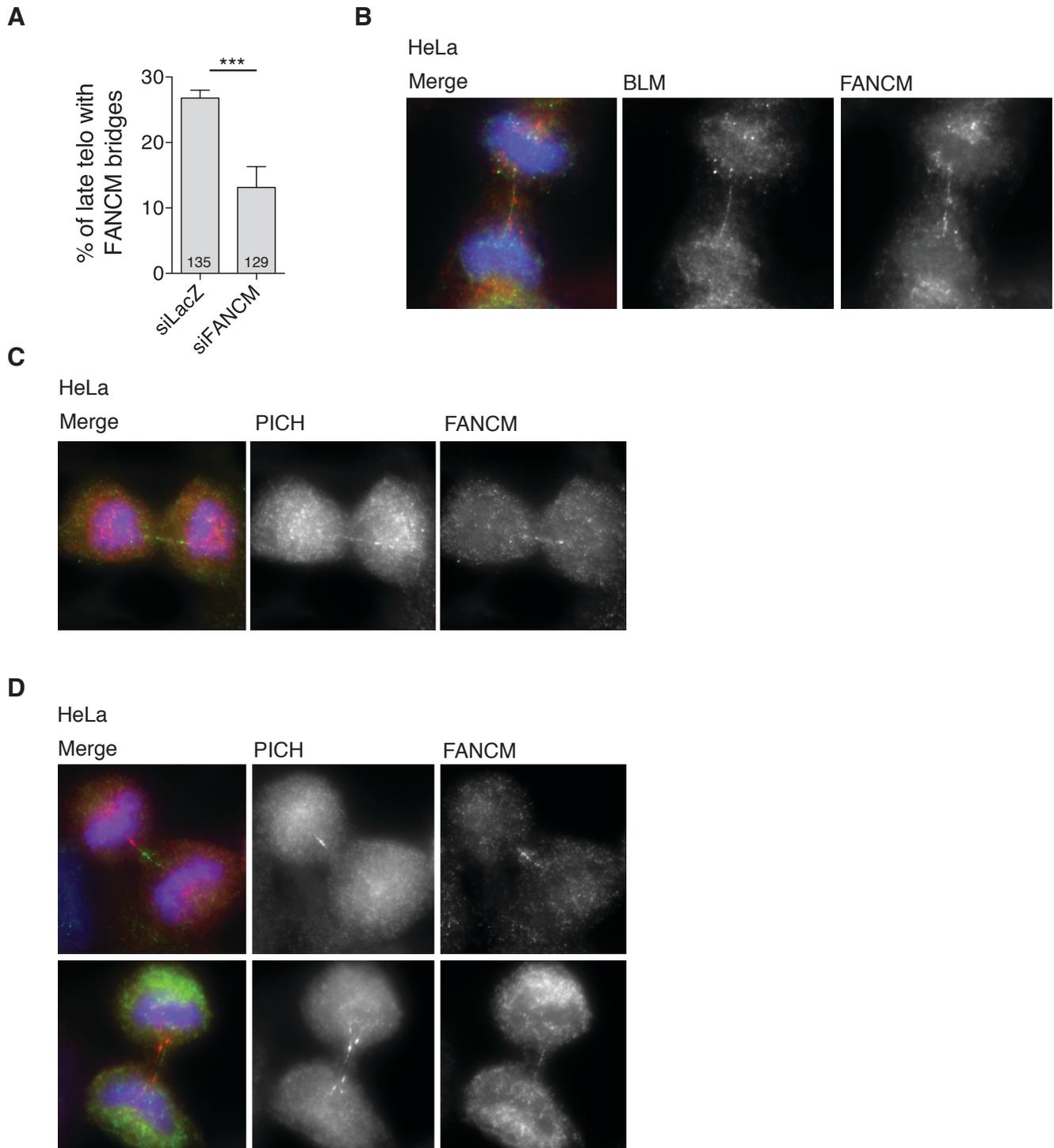
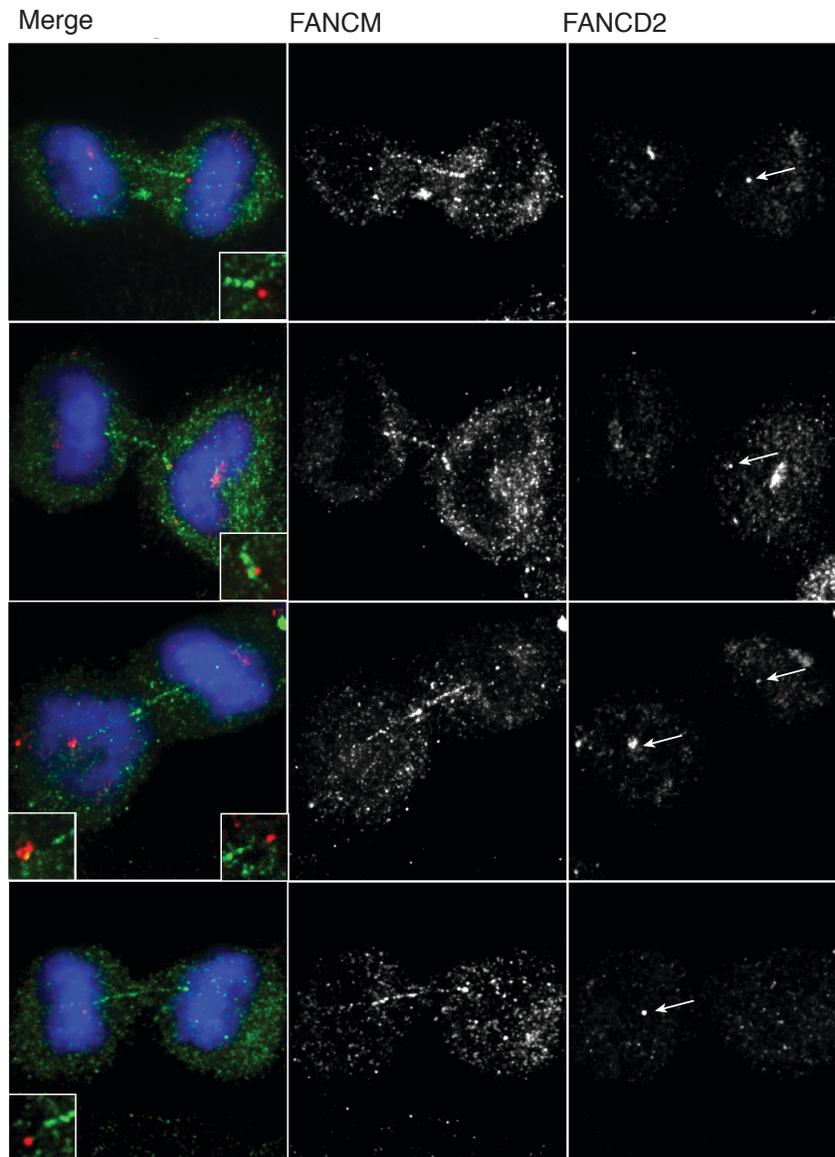


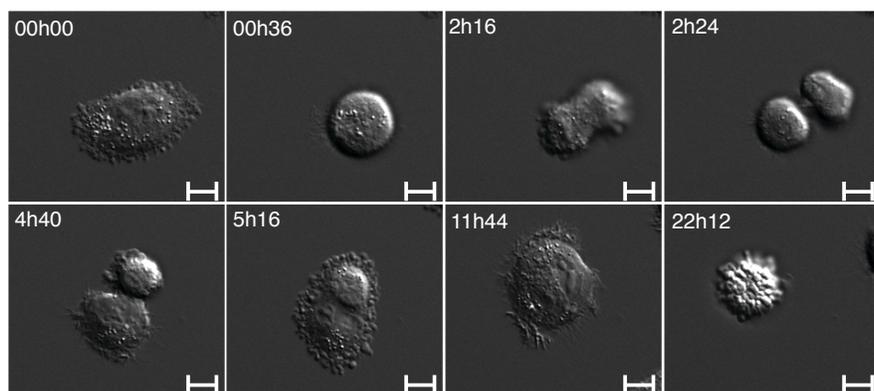
Suppl. Figure 1. FA Pathway deficient cells exhibit more chromosome segregation defects than their corrected counterparts. **(A)** Mitotic FA-G+V and FA-G+G analyzed in Figure 1B were also scored for chromosome segregation defects such as lagging chromatin and Hoechst positive DNA bridges. The number of mitotic cells analyzed is indicated in each bar. **(B)** Representative images of mitotic cells scored in (A) showing lagging chromatin or Hoechst positive DNA bridge. **(C)** Frequency of mitoses displaying BLM bridges in FANCD1/BRCA2 deficient (VU423, FA-D1+V) and FANCD1/BRCA2 reconstituted cells (FA-D1+D1). **(D)** Western blots showing the levels of FANCA and FANCI downregulation in HeLa shFANCA (lanes 2 and 5) and shFANCI cells (lanes 3 and 6) compared to HeLa shScramble (lanes 1 and 4). Notice the absence of FANCD2 and FANCI monoubiquitination in lanes 5 and 6 after MMC treatment (50 ng/ml for 16h) compared to lane 4.



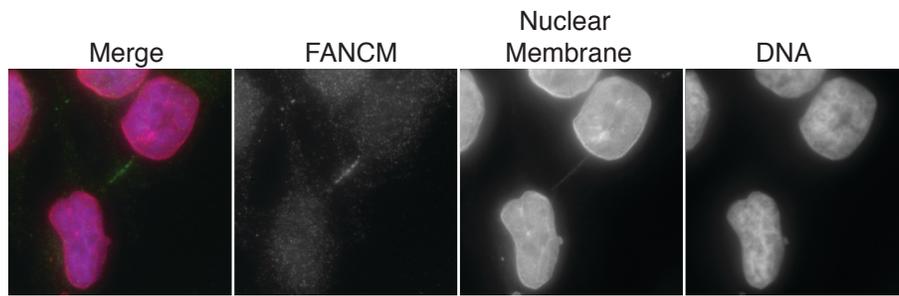
Suppl. Figure 2. Localization of FANCM protein to UFBs. **(A)** Quantification of FANCM UFBs in HeLa cells exposed to either siRNA control (siLacZ) or FANCM siRNA (siFANCM) for 72h. Error bars are mean from three independent experiments with SEM (***) $P < 0.01$, Student's t-test). The number of mitotic cells analyzed is indicated in each bar. **(B)** Representative image of colocalization of BLM (green) and FANCM (red) in a HeLa cell in late telophase. DNA is in blue. **(C)** Representative image of colocalization of PICH (red) and FANCM (green) in HeLa cells in late telophase. **(D)** Representative images of UFBs coated partly by PICH (red) and partly by FANCM (green). DNA is in blue.



Suppl. Figure 3. Representative confocal images of FANCM bridges (green) linking DNA fragile sites marked by FANCD2 foci (red and indicated by arrows). Insets show higher magnification of FANCM bridges connecting FANCD2 foci. HeLa cells were treated for 18h with Aphidicolin (0.3 μ M) and then released for 6h before fixation.



Suppl. Figure 4. Snapshots of a representative failed cytokinesis followed by apoptosis. Time is indicated in hours and minutes (see also Suppl. Movie 3). Scale bars, 10 μ M.



Suppl. Figure 5. Representative image of a FANCM bridge coated by Lap2. HeLa cells were stained for FANCM (green), Lap2 (nuclear membrane, red) and DNA (blue).

Suppl. Movie 1. A representative FA pathway deficient cell that undergoes a successful division. Images captured every 4 minutes.

Suppl. Movie 2. A representative FA pathway deficient cell that fails cytokinesis. Images captured every 4 minutes.

Suppl. Movie 3. A representative FA pathway deficient cell that fails cytokinesis and subsequently dies by apoptosis. Images captured every 4 minutes.