

**Supplementary Figure 1:** Loss of ARF results in diminished p53-function and impaired senescence, but does not impact apoptosis. RCAS retrovirus was used to carry *caErbb2* into the mammary glands. Early lesions were analyzed two weeks following viral injection. Scale bar =  $20\mu m$ . For bar graphs, columns represent the mean, and error bars represent the SEM. Representative images shown.

- A. Quantification of p53 target p21-positive cells in premalignant lesions from wildtype and ARF-null mice (n=2, 3).
- B. Quantification of senescence-associated  $\beta$ -galactosidase-positive cells in premalignant lesions from wildtype and *ARF*-null mice (n=4, 6).
- C. Quantification of senescence marker p16-positive cells in premalignant lesions from wildtype and ARF-null mice (n=3).
- D. Quantification of TUNEL-positive cells (red) in premalignant lesions from wildtype and ARF-null mice (n=3).
- E. Quantification of CC3-positive cells in premalignant lesions from wildtype and ARF-null mice (n=3, 6).