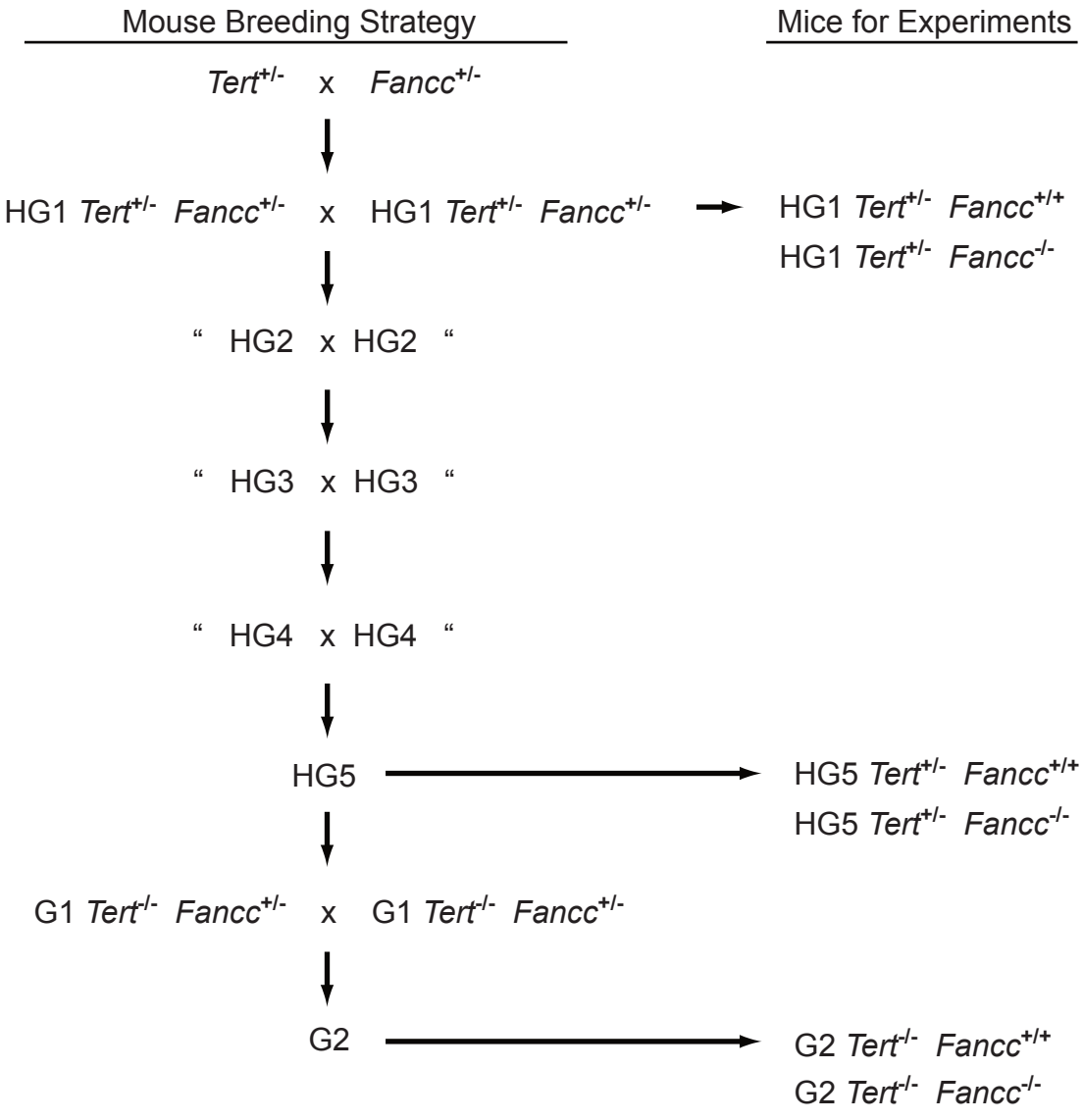
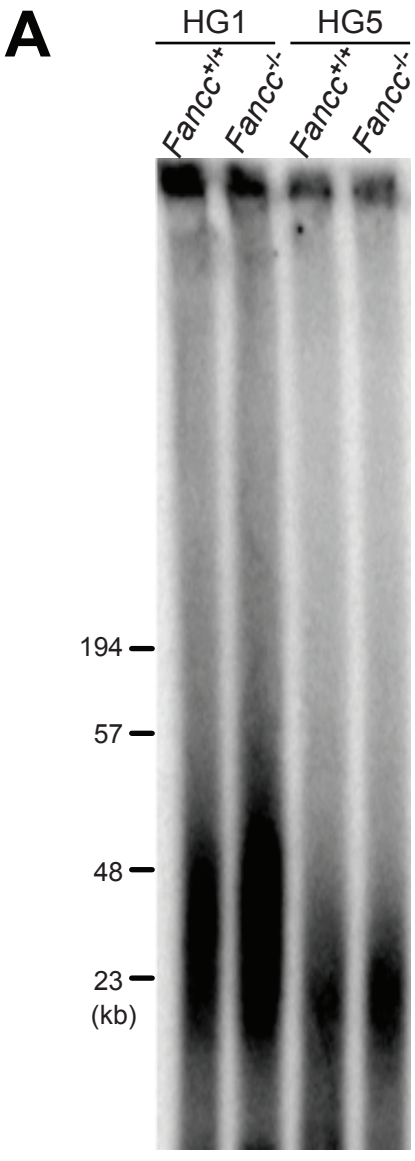


Figure S1. A schematic representation of mouse breeding strategy for different generation *Tert* mutant mice.



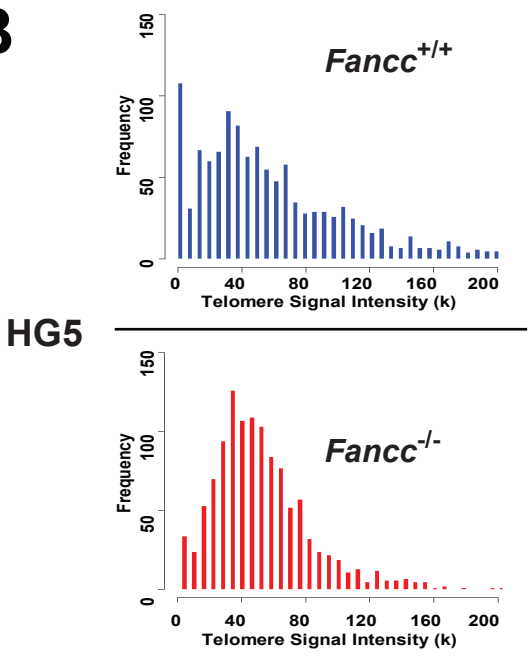


Figure S2. A significant reduction in overall telomere length was evident in HG5 mutant mice. (A) Telomere restriction fragment analysis of mouse bone marrow cells derived from HG1 and HG5 *Fancc*$^{+/+}$ and *Fancc*$^{-/-}$ mice. Genomic DNA was resolved by pulsed-field gel electrophoresis and hybridized with a radioactively labeled (AATCCC)4 probe. A significant decrease in telomere length was detected in HG5 mice in comparison to HG1 mice. (B) Q-FISH analysis of bone marrow cells derived from HG5 *Tert*$^{+/-}$ *Fancc*$^{+/+}$ and *Tert*$^{+/-}$ *Fancc*$^{-/-}$.

Primer	Sequence
Tert Forward	5'-TGGTGGAGGTTGTTGCCAA-3'
Tert Reverse	5'-CCACTGCATACTGGCGGATAC-3'
Terc Forward	5'-GTGGTGGCCATTTTTTGTCTAAC-3'
Terc Reverse	5'-TGCTCTAGAATGAACGGTGGAA-3'
Beta-Actin Forward	5'-GACCTCTATGCCAACACAGTGCTG-3'
Beta-Actin Reverse	5'-CACCGATCCACACAGAGTACTTGC-3'

Figure S3. Summary of primer sequences for qT-PCR analysis