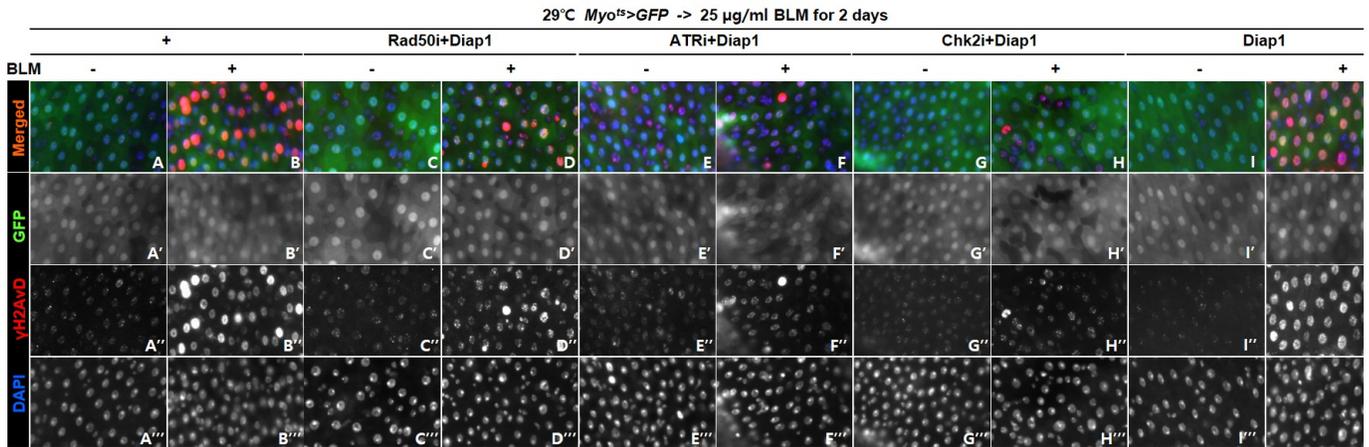
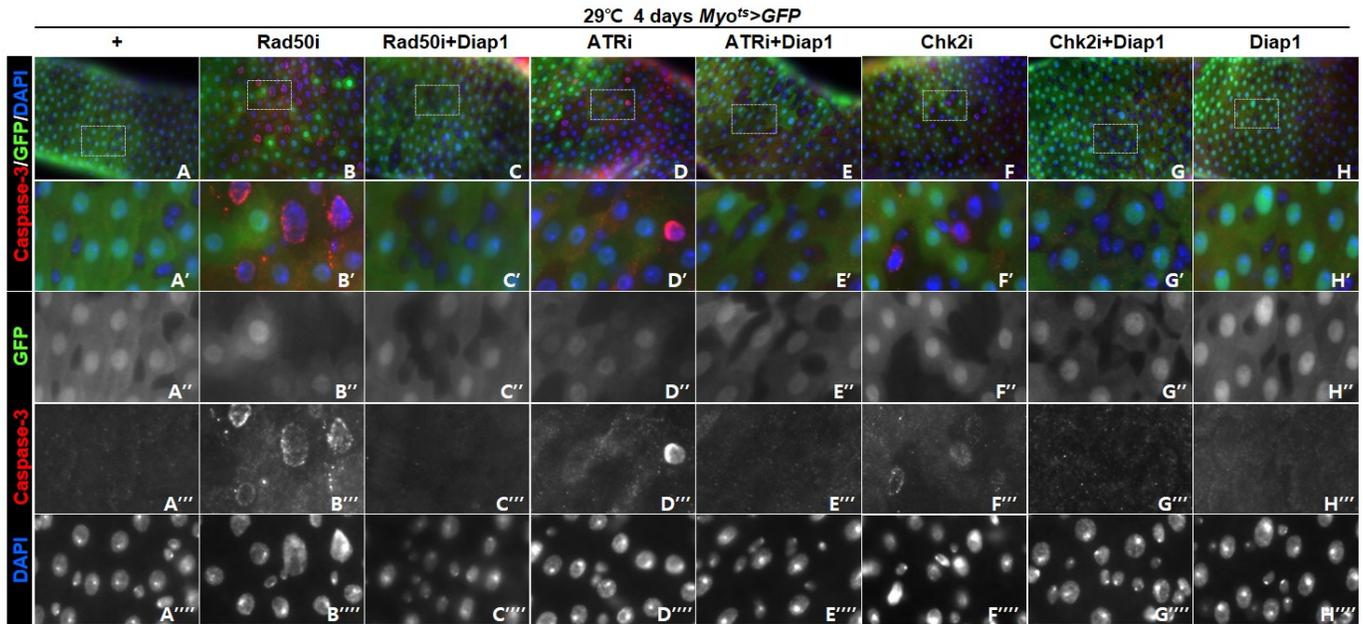


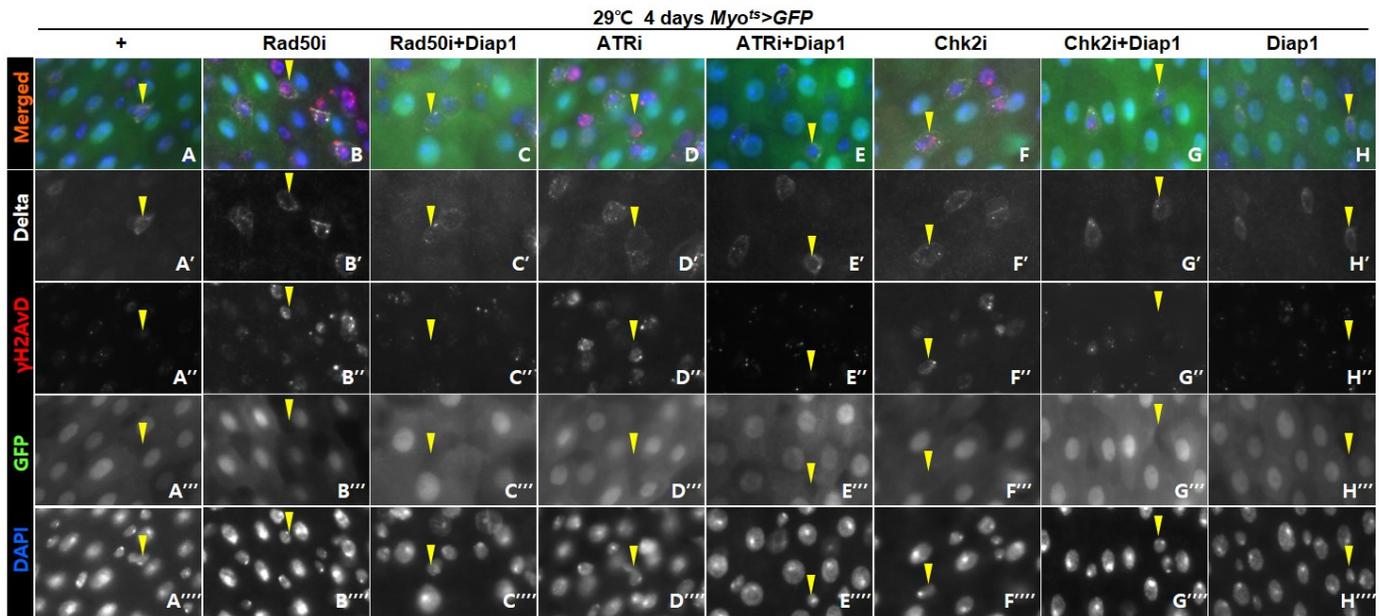
SUPPLEMENTARY MATERIAL



Supplementary Figure 1. Confirmation of combination with DDR-related factors knockdown and Diap1 overexpression. Flies carrying *Myo^{ts}>GFP*, *Myo^{ts}>GFP+Rad50i*, *Myo^{ts}>GFP+Rad50i+Diap1*, *Myo^{ts}>GFP+ATRi*, *Myo^{ts}>GFP+ATRi+Diap1*, *Myo^{ts}>GFP+Chk2i*, *Myo^{ts}>GFP+Chk2i+Diap1*, or *Myo^{ts}>GFP+Diap1* genotypes were fed media with 25 µg/ml Bleomycin at 29 °C for 2 days. The guts of flies were dissected and labeled with anti-GFP (green) and anti- γ H2AvD (red) antibodies and DAPI (blue). A'-A''', B'-B''', C'-C''', D'-D''', E'-E''', F'-F''', G'-G''', H'-H''', I'-I''', and J'-J'''' were gray scale image of in A-J, respectively. Original magnification is 400x.



Supplementary Figure 2. Effect of Diap1 overexpression on EC-specific knockdown of DDR-related factors-induced of EC death. Flies carrying *Myo^{ts}>GFP*, *Myo^{ts}>GFP+Rad50i*, *Myo^{ts}>GFP+Rad50i+Diap1*, *Myo^{ts}>GFP+ATRi*, *Myo^{ts}>GFP+ATRi+Diap1*, *Myo^{ts}>GFP+Chk2i*, *Myo^{ts}>GFP+Chk2i+Diap1*, or *Myo^{ts}>GFP+Diap1* genotypes were cultured at 29 °C for 4 days. The guts of flies were dissected and labeled with anti-GFP (green) and anti-Cleaved Caspase-3 (red) antibodies and DAPI (blue). A'-A''', B'-B''', C'-C''', D'-D''', E'-E''', F'-F''', G'-G''', and H'-H'''' were enlarged image of white square in A-H, respectively. A''-A''''', B''-B''''', C''-C''''', D''-D''''', E''-E''''', F''-F''''', G''-G''''', and H''-H'''''' were gray scale image of in A'-H', respectively. Original magnification is 400x.



Supplementary Figure 3. Effect of Diap1 overexpression on EC-specific knockdown of DDR-related factors-induced DNA damage accumulation in ISCs. Flies carrying *Myo^{ts}>GFP*, *Myo^{ts}>GFP+Rad50i*, *Myo^{ts}>GFP+Rad50i+Diap1*, *Myo^{ts}>GFP+ATRi*, *Myo^{ts}>GFP+ATRi+Diap1*, *Myo^{ts}>GFP+Chk2i*, *Myo^{ts}>GFP+Chk2i+Diap1*, or *Myo^{ts}>GFP+Diap1* genotypes were cultured at 29 °C for 4 days. The guts of flies were dissected and labeled with anti-GFP (green), anti-Delta (white), and anti-γH2AvD (red) antibodies and DAPI (blue). A'-A''''', B'-B''''', C'-C''''', D'-D''''', E'-E''''', F'-F''''', G'-G''''', and H'-H'''''' were gray scale image of in A-H, respectively. Yellow arrow heads indicate Delta⁺ cell. Original magnification is 400x.

SUPPLEMENTARY MATERIALS AND METHODS

Flies

UAS-Diap1 were kindly provided by the Bloomington Stock Center.

Fly genotypes

Myo1A-GAL4/+;UAS-GFP,tub-Gal80^{ts}/+

Myo1A-GAL4/UAS-Rad50-RNAi;UAS-GFP,tub-Gal80^{ts}/+

Myo1A-GAL4/UAS-Rad50-RNAi;UAS-GFP,tub-Gal80^{ts}/UAS-Diap1

Myo1A-GAL4/UAS-ATR-RNAi;UAS-GFP,tub-Gal80^{ts}/+

Myo1A-GAL4/UAS-ATR-RNAi;UAS-GFP,tub-Gal80^{ts}/UAS-Diap1

Myo1A-GAL4/UAS-Chk2-RNAi;UAS-GFP,tub-Gal80^{ts}/+

Myo1A-GAL4/UAS-Chk2-RNAi;UAS-GFP,tub-Gal80^{ts}/UAS-Diap1

Myo1A-GAL4/+;UAS-GFP,tub-Gal80^{ts}/UAS-Diap1

Bleomycin feeding assay

Three-day-old flies were fed 25 μg/ml Bleomycin (Sigma-Aldrich) in normal media for 2 days at 29 °C.