





Supplementary information, Figure S10 TTALE-mediated visualization of aging-associated DDRs at telomeric and centromeric loci. (A, C) Immunofluorescence analysis of γ -H2AX (green) expression in mCherry-TTALE^{telo}-transfected (red) (A) and mCherry-TTALE^{centro}-transfected (red) (C) WT and WS hMSCs. HU treatment (10 nM, 2 hours) was used as a positive control to induce γ -H2AX. Dashed lines indicate the nuclear boundary. Scale bars, 5 μ m. (B, D) Number of γ -H2AX-positive telomeres (B) or centromeres (D) per cell in WS hMSCs, untreated WT hMSCs, and WT hMSCs treated with HU. n = 50 nuclei per group; ***p < 0.001.