

Description of Additional Supplementary Files

File Name: Supplementary Movie 1 & 2

Description: **Mosaic Ras^{G12V} cell apically protrudes (1) and leaves (2) from the larval skin.**

Time-lapse imaging of the head region of 1 dpf Tg(*krt4p:gal4*; UAS:EGFP) larva with mosaically introduced mKO2⁺Ras⁺ cells (red).

File Name: Supplementary Movie 3

Description: **Mosaic Ras^{G12V}-TP53^{R175H} double-mutant cells forms heterogenous tumour-like cell mass.**

Time-lapse imaging of the head region of 1 dpf Tg(*krt4p:gal4*; UAS:EGFP) larva with mosaically introduced mKO2⁺Ras⁺TP53⁺ cells (red).

File Name: Supplementary Movie 4

Description: **Live imaging of Ras^{G12V}-TP53^{R175H} double-mutant cells to senesce.**

Time-lapse imaging of *cdkn2a/b* reporter expression (green) in 20–24 hpf Tg(*cdkn2a/b*-hs:Achilles) larvae with mosaically introduced mCherry⁺Ras^{G12V}TP53^{R175H} cells (magenta). *cdkn2a/b* reporter was gradually upregulated in the nucleus of double-mutant cell.

File Name: Supplementary Movie 5

Description: **Live imaging of Ras^{G12V}-TP53^{R175H} double-mutant cell neighbours to senesce.**

Time-lapse imaging of *cdkn2a/b* reporter expression (green) in 29–32 hpf Tg(*cdkn2a/b*-hs:Achilles) larvae with mosaically introduced mCherry⁺Ras^{G12V}TP53^{R175H} cells (magenta). *cdkn2a/b* reporter was gradually upregulated in the nucleus of double-mutant cell neighbour.