



Fig. S1. Histology and RNA FISH of the unamputated control digit. (A) Hematoxylin and Eosin (H&E) staining of the adult mouse digit tip. Scale: 0.2 mm. (B) Picrosirius Red (PSR) staining imaged with polarized light microscopy shows collagenous tissues (red) and nail keratin (yellow). Scale: 0.2 mm. (C) Second harmonic generation (SHG) imaging shows collagen microstructure (green). Scale: 0.2 mm. (D) Density heat maps show estimated RNA FISH probes per unit area for *Hoxa13* (green), *Runx2* (magenta), and *H19* (orange). Circles represent individual probe signals. Regions of interest shown in (E) include the periosteum (P), marrow cavity (MC), digit tip (DT), and skin (S). Scale: 0.2 mm. (E) Confocal images at 63X magnification show RNA FISH probes for *Hoxa13*, *Runx2*, and *H19*, and cell nuclei (DAPI, blue) in various tissues. Marrow stromal connective tissue is autofluorescent (green). Scale: 10 μ m.