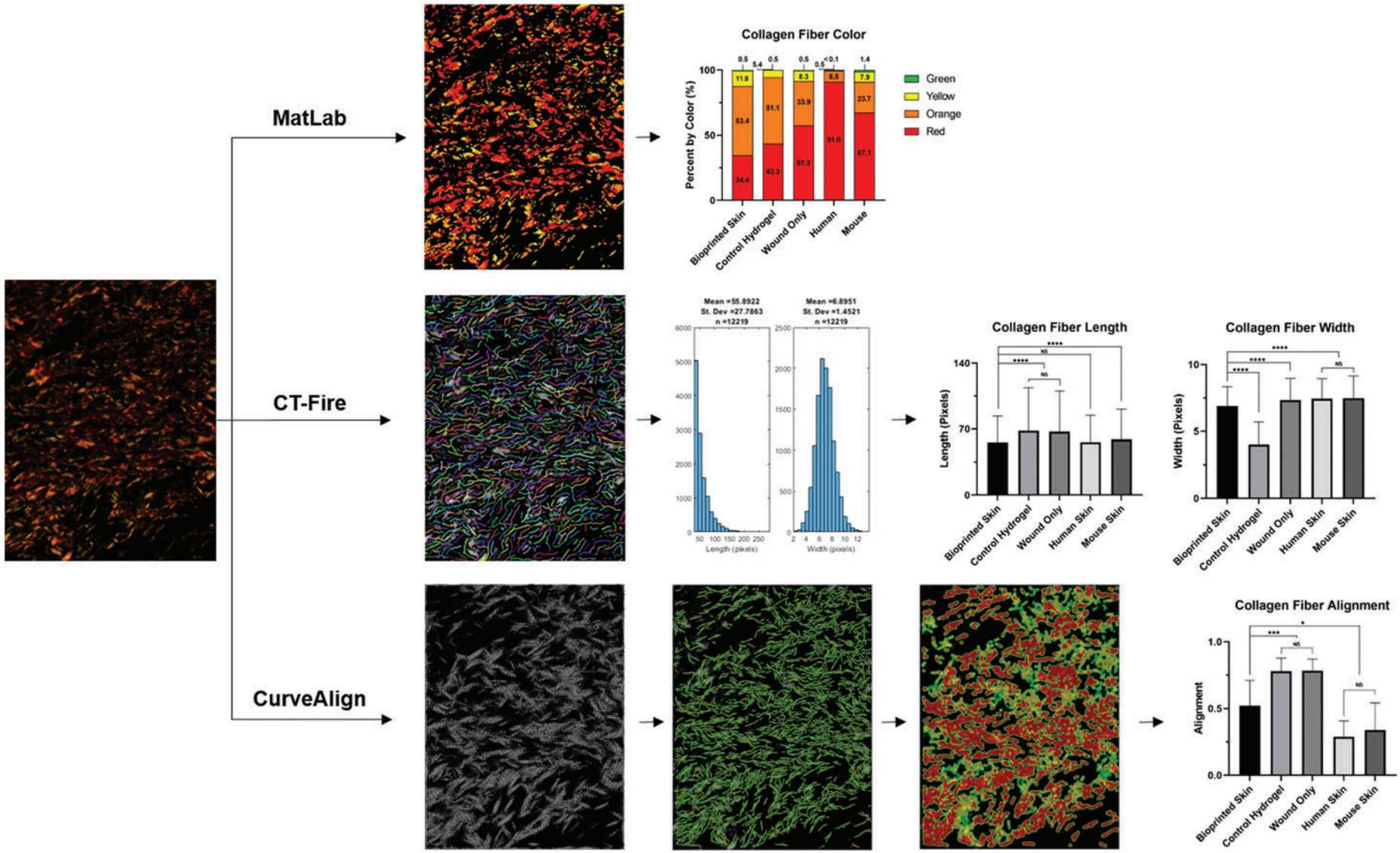

SUPPLEMENTARY FIG. S3. Picrosirius Red Image Analysis with MATLAB, CurveAlign, and CT-FIRE. Collagen fiber color, length, width, and orientation were quantified from picrosirius red stained samples using MATLAB, CurveAlign, and CT-FIRE. A custom MATLAB code was used to threshold the four main colors seen in picrosirius red stained samples under polarized light; *red*, *orange*, *yellow*, and *green* (*top row*). These were then presented as stacked bar graphs by dividing the pixel count of each color by the total pixel count for each image. CT-FIRE was used to overlay each collagen fiber and then quantify individual fiber width and length (*middle row*; ≈ 300 fibers per image; 3 images per sample; 12 samples per group; >11,000 fibers per group). The resultant mean collagen fiber length in pixels, standard deviation, and sample size was statistically measured using GraphPad Prism software. Similarly, CurveAlign was used to overlay each collagen fiber, which was then converted into a direction heat map, allowing for quantification of the coefficient of alignment; with zero being no alignment or more normal and 1 being complete alignment or more scar like (*bottom row*; ≈ 300 fibers per image; 3 images per sample; 12 samples per group; >11,000 fibers per group). The coefficient of alignment for each group was then put into GraphPad Prism for statistical analysis (****$p < 0.0001$; ***$p < 0.001$; *$p < 0.05$; NS, $p > 0.05$). CT-FIRE, curvelet transform-fiber extraction.