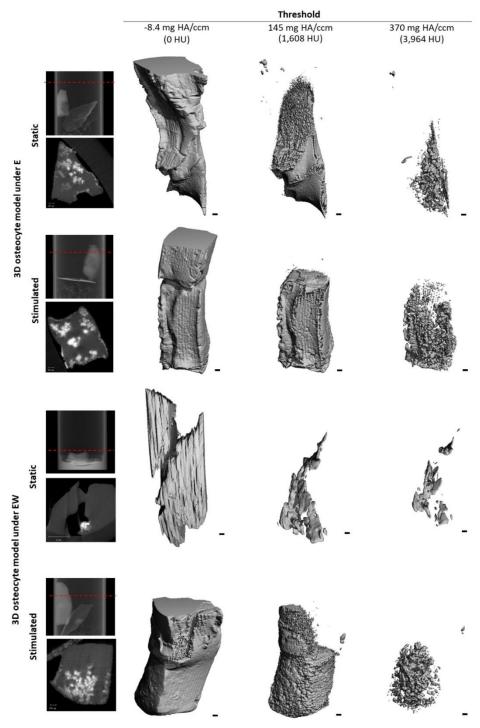
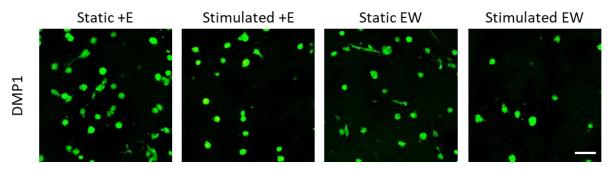


## Supplementary Material



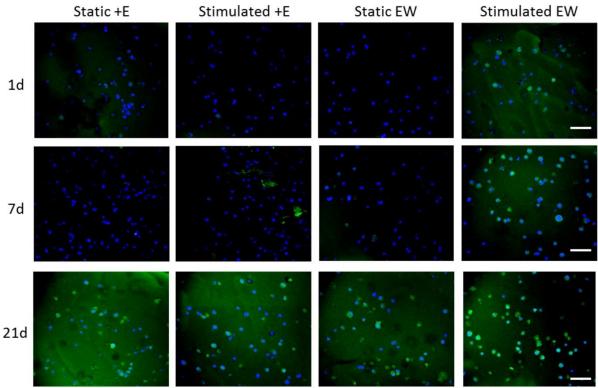
**Supplementary Figure 1:**  $\mu$ CT scans of constructs at day 21 presented as Greyscale images. Dashed red line indicates where cross-sectional image was taken from. Mineralized regions can be seen in white and hydrogel material as grey. 3D reconstructions of the VOI shown for thresholds -8.4, 145 and 370 mg HA/cm<sup>3</sup>. Scale bars = 100  $\mu$ m.

## Actin/DMP1 staining at day 1



**Supplementary Figure 2:** Actin (green) and DMP1 (red) immunofluorescence staining of gelatin constructs at Day 1 confirming that there was no aspecific staining for DMP1 (red) due to the gelatin constructs or in cells prior to differentiation; Images were taken from the construct surface to a depth of approximately 65  $\mu$ m. Scale bar = 50  $\mu$ m.

## Collagen I staining Static +E



**Supplementary Figure 3:** Collagen 1 immunofluorescence staining of day 1, 7 and 21 constructs; Images were taken from the construct surface to a depth of approximately 65  $\mu$ m. Scale bar = 50  $\mu$ m.