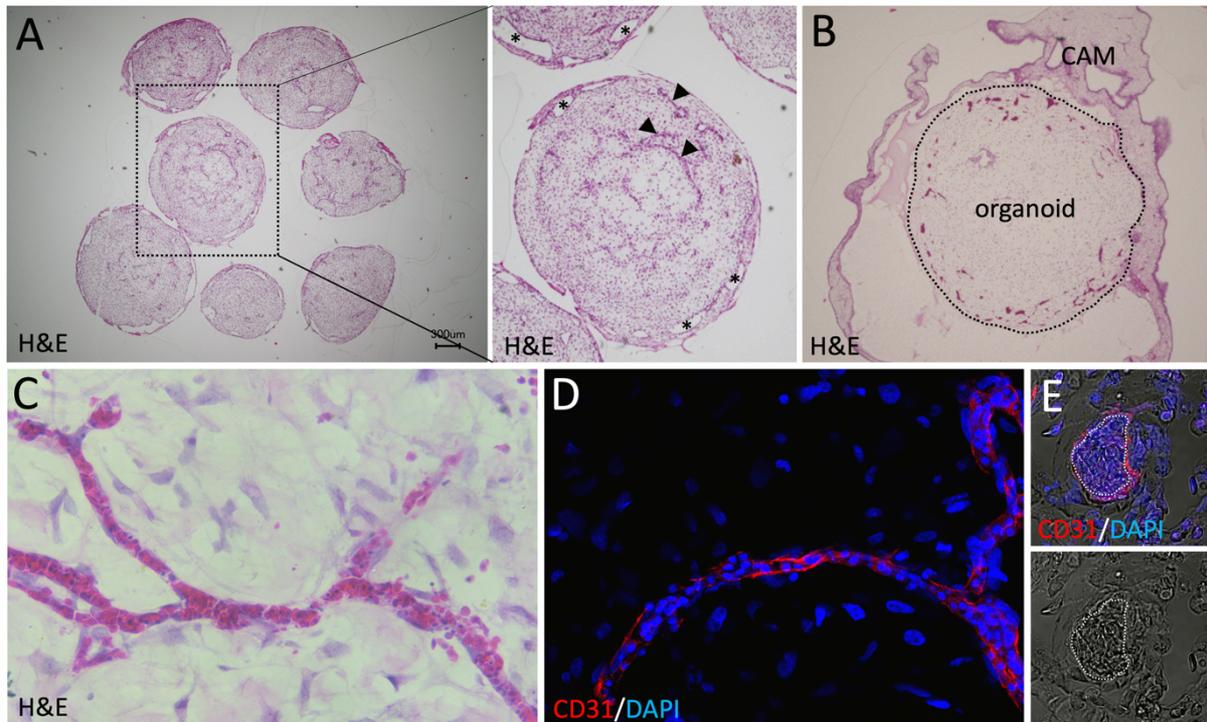
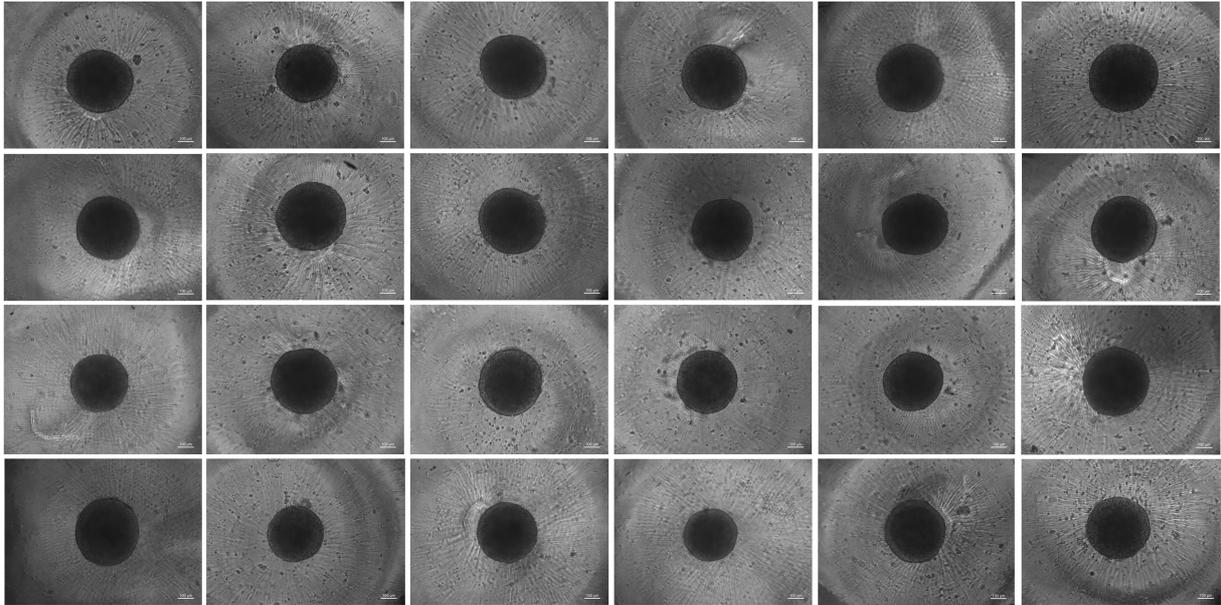


## Supplemental Material



**Figure S1: Non-transplanted and transplanted blood vessel organoids**

A: Blood vessel organoid at day 25 of culture. Inset shows higher magnification. A ring of large vessels is visible in the organoid's periphery (black asterisks). Small vascular sprouts grow towards the center of the organoid (black arrowheads). B: Blood vessel organoid transplanted on the CAM for 7 days. Black dotted line highlights the outline of the organoid. Blood perfusion of the organoid's periphery is clearly visible (intense purple staining). C: Higher magnification of blood perfused human organoid vessel. D: Human specific CD31 antibody was used to identify human blood perfused vessels within the transplanted organoid. DAPI positive nuclei within the vessel lumen represent chicken blood cells. E: Cross section of a human vessel within a transplanted blood vessel organoid filled with chicken blood cells.



**Figure S2: Uniformity of organoids**

20 randomly picked 7 days old blood vessel organoids from the same experiment are displayed. All organoids show comparable size and shape.