Electronic Supplementary Information (ESI)

3D *in vitro* pericyte-supported microvessel model: Visualisation and quantitative characterisation of multistep angiogenesis

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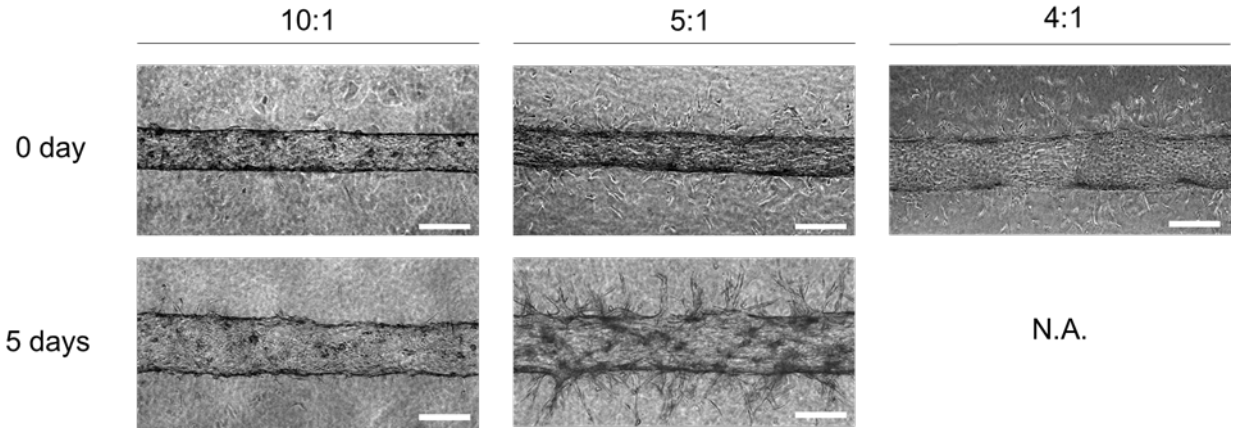


Fig. S1 Optimization of EC:PC ratio in EC-PC co-culture vessels. Bright field microscopy (BFM) images of the EC-PC co-culture vessels with different EC:PC ratio that were cultured with additional VEGF for 5 days. With 10:1 ratio, angiogenic behaviour was no different from the EC mono-culture vessels, while with 4:1 ratio vigorous PC migration caused the vessel structure to tear apart. With 5:1 ratio, the vessel structure was maintained and also angiogenic responses were distinguishable. Scale bars= 200µm, [VEGF]= 50 ng/mL.

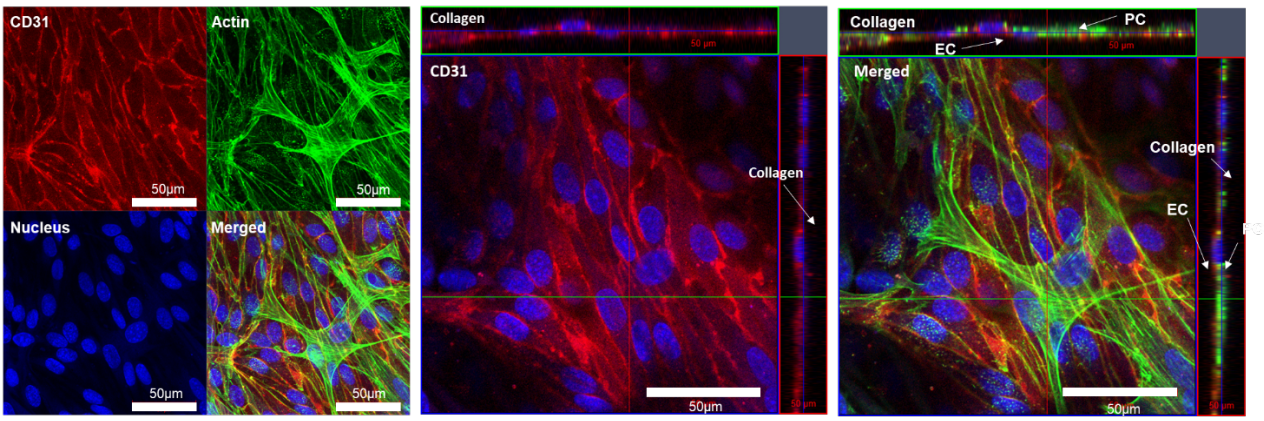
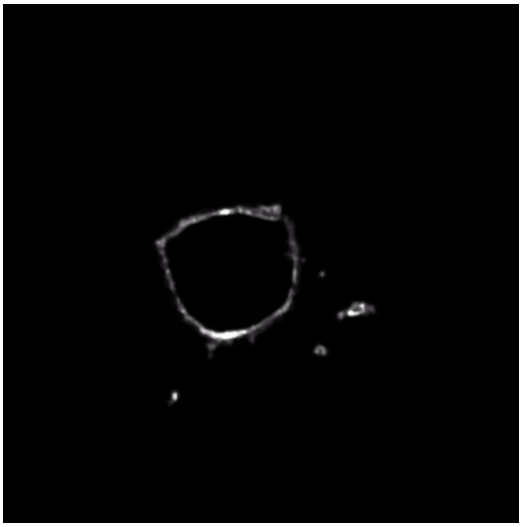
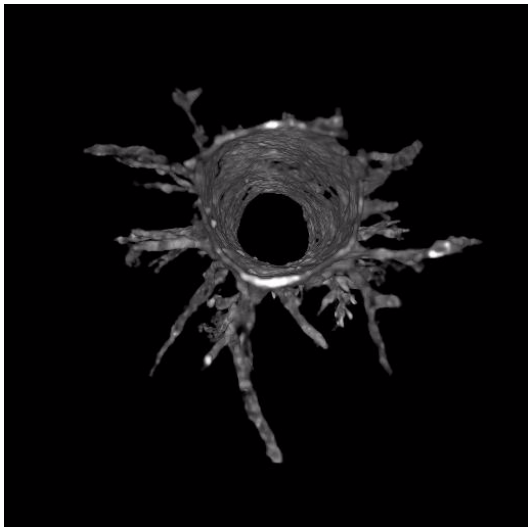


Fig. S2 2D culture of the EC and PC mixture. Confocal laser scanning microscopy (CLSM) images of EC-PC co-culture obtained after 5 days of culture with additional VEGF in 2D showed separation of PC layer from the EC layer, with PC layer located between the collagen and EC layer. CD31 as EC specific marker was stained in red and F-actin and nucleus for both ECs and PCs were stained in green and blue, respectively. [VEGF]= 50 ng/mL.



Movie. S1 2D cross-sectional images of EC-PC co-culture vessel. 2D cross-sectional images of EC-PC co-culture vessel in sequence were obtained after 5 days of culture with additional VEGF.



Movie. S2 3D reconstructed image of EC-PC co-culture vessel. 3D reconstructed image of EC-PC co-culture vessel obtained after 5 days of culture with additional VEGF.