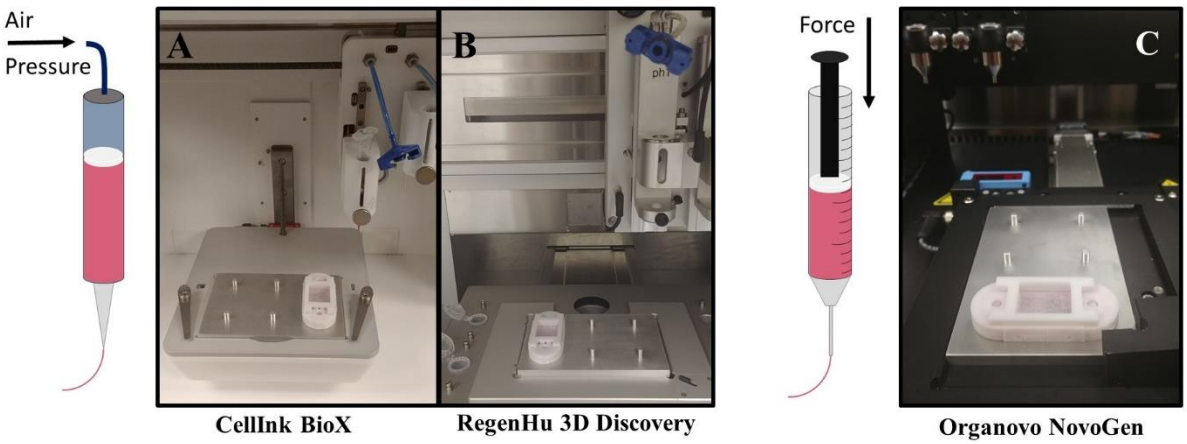

Figure S1. Schematic of two extrusion-based bioprinting methods. (A,B) The syringe and set of printers on the left are driven pneumatically by using air pressure and the associated syringes lack the graduations necessary for quantifying volumes dispensed. (C) The Hamilton syringe and Organovo bioprinter on the right is driven by direct mechanical force on the plunger. The Hamilton syringe features graduations for exact volume quantification, depicted on the right.

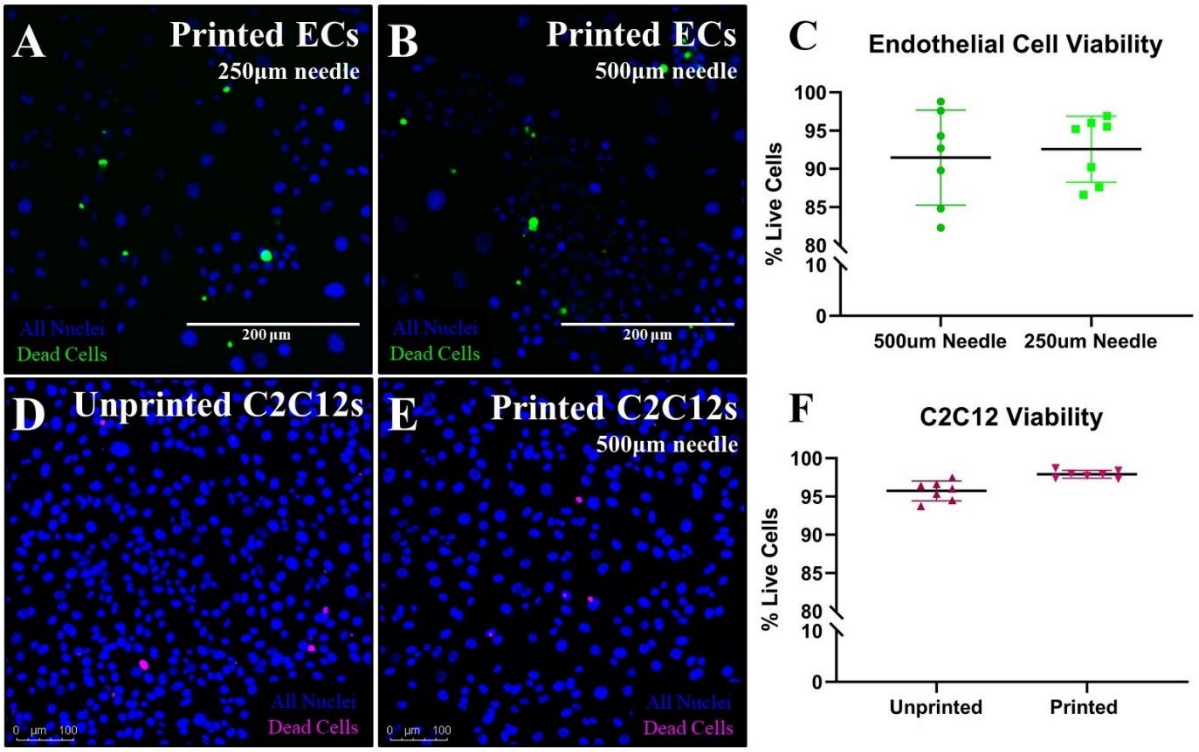

Figure S2. Cell viability 24 hours after bioprinting. (A) Primary endothelial cells (CellBiologics cat # C57-6214 at passage 11) printed in 2% HA gel through a 250µm needle and (B) through a 500µm needle onto a 6-well cell culture dish. After 24 hours, all cells were stained with DAPI (blue) and dead cells were stained green (ReadyProbes® Cell Viability Imaging kit), scale bar = 200µm. (C) Seven random representative 10x objective images were taken from one printed area per group and both all cells and all dead cells were counted. From these counts, the percent of live cells was calculated. (D-E) C2C12s were encapsulated in 2% HA gel at a concentration of $4.7x10^6$/mL and dispensed onto glass slides by: (D) hand seeding and (E) printing through a 500µm needle. After 24 hours, all cells stained with DAPI (blue) and dead cells were stained red, scale bar = 100µm. (F) Percent live cells quantified as above in (C).