Electronic Supplementary Material (ESI) for Lab on a Chip.

Supplemental Data:

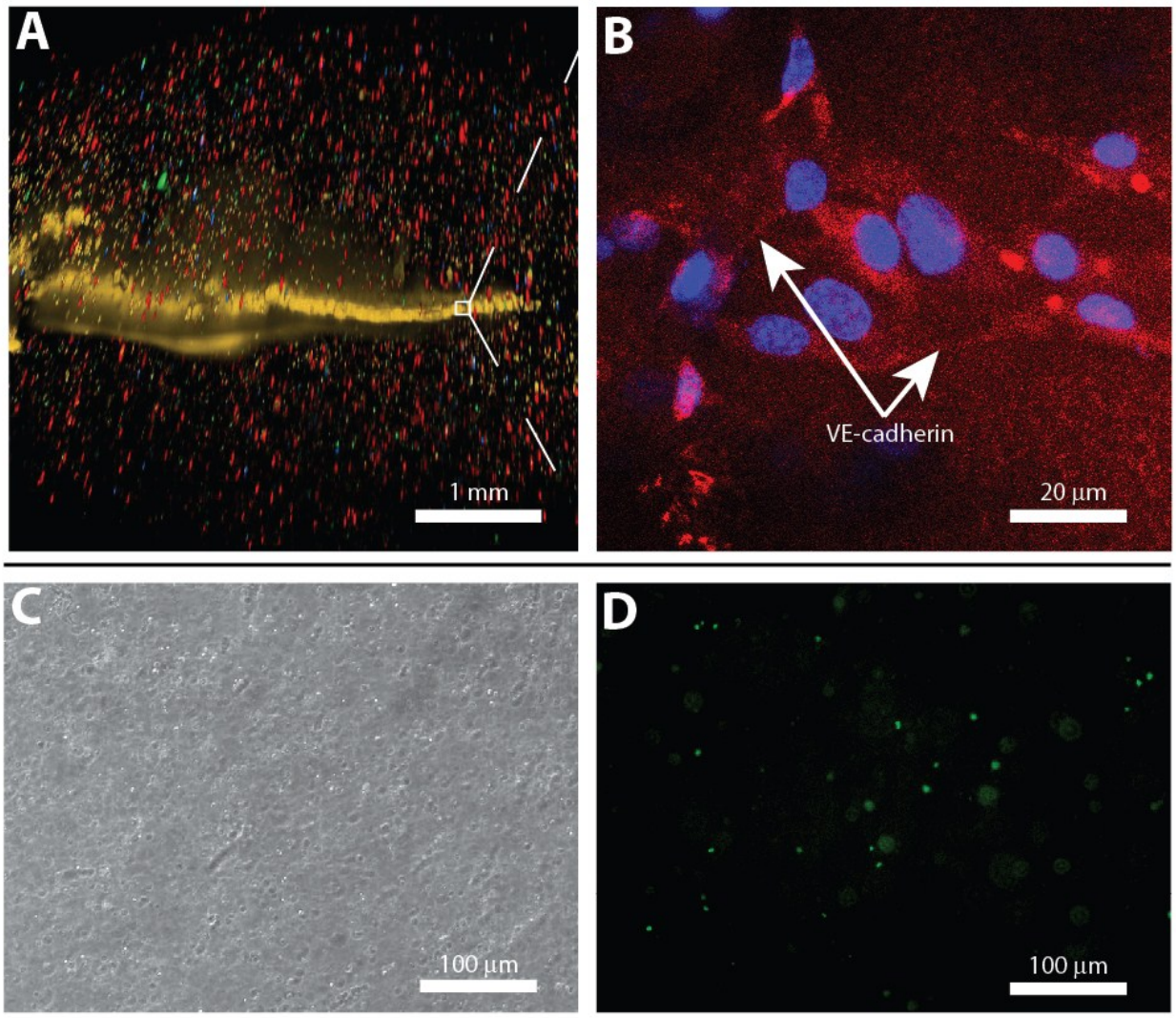

Fig. S1: Endothelial and immune cells present in the DLBCL tumor microenvironment are viable and in close proximity to each other in the lymphoma-on-chip model. A) Confocal micrograph showing various immune cells and endothelial cells in close proximity to one another in the DLBCL-on-chip model. **B)** Endothelial cells express minimal VE-cadherin at the cell-cell junctions, indicating presence of a permeable endothelial monolayer within the microchannel. **C-D)** Bright field and epifluorescence micrographs showing total and live tumor cells within the lymphoma-on chip model. This data was used to calculate a tumor cell viability of ~70%.

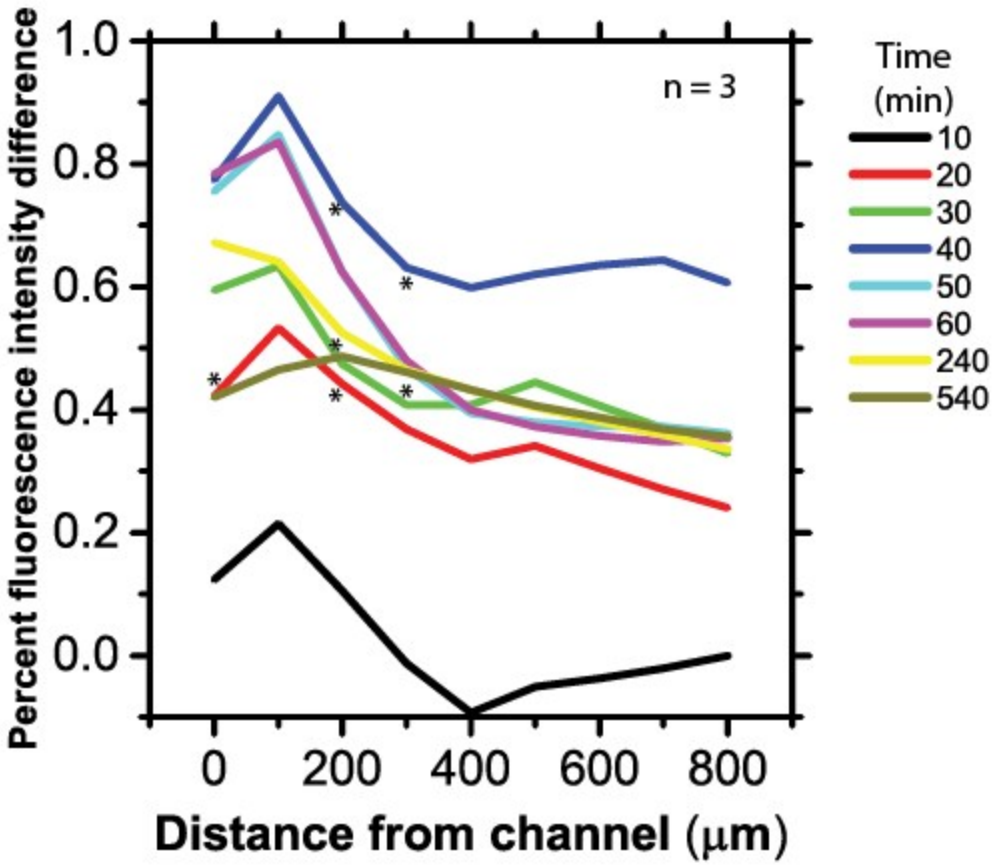

Fig. S2: Presence of tumor cells in the DLBCL-on-a-chip model leads to an increase in the permeability of the endothelial channel. The percentage fluorescence intensity difference shows the percent change of fluorescence intensity when tumor cells are added to the DLBCL-on-a-chip model. Positive values indicate an increase in endothelial permeability when tumor cells are present. Fluorescence intensity was used to measure endothelial channel permeability, and is a measurement of infused fluorescent antibody that had diffused into the hydrogel. Fluorescence intensity was measured at increasing time points and distances from the endothelial channel. Asterisks indicate values that show a statistically significant increase in endothelial permeability when tumor cells are present. Statistical significance was determined via t-test ($p < 0.05$). $n = 3$.