

Abstract Submitted
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Contractile forces originating from Cancer Diskiod regulated by geometrical ECM properties. AMANI ALOBAIDI, BO SUN, Oregon State Univ — Cancer cell migration in three-dimensional extracellular matrix is a major cause of death for cancer patients. Although extensive studies have enlightened detailed mechanism of single cell 3D invasion and cell-ECM interaction, 3D collective cancer invasion is still poorly understood. To capture collective cancer invasion with more realistic, we developed a novel 3D invasion assay, Diskiod In Geometrically Micropatterned ECM (DIGME). DIGME allows us to independently controlling the shape the shape of tumor organoids, microstructure and spatial heterogeneity of the extracellular matrix all at the same time. Here we study the affect of contractile forces originating from different geometrical cancer diskiods. We show that cancer invasion could be regulated by geometrical ECM properties.

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