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Abstract for an Invited Paper for the NWS19 Meeting of the American Physical Society

Revisiting The Mechanical Feedback Between Tumors And Their Microenvironment

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The mechanical interactions between cancer cells and their microenvironment as key regulators in tumor progression has been an emergent field of research. However, we find many observations that derived from 2D systems do not translate to 3D space and multicellular systems. In this talk, I will discuss recent biophysics progresses in understanding the reciprocal and mechanical interactions between cells an extracellular matrix. We will also show that these insights allow us to construct a new model for collective cancer invasions.