

Abstract Submitted
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A cellular automaton model for tumor growth in heterogeneous environment¹ YANG JIAO, Physical Science in Oncology Center, Princeton University, SAL TORQUATO, Dept. Chemistry, Princeton University — Cancer is not a single disease: it exhibits heterogeneity on different spatial and temporal scales and strongly interacts with its host environment. Most mathematical modeling of malignant tumor growth has assumed a homogeneous host environment. We have developed a cellular automaton model for tumor growth that explicitly incorporates the structural heterogeneity of the host environment such as tumor stroma. We show that these structural heterogeneities have non-trivial effects on the tumor growth dynamics and prognosis.

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