

Abstract Submitted
for the TSF15 Meeting of
The American Physical Society

Searching for an Optimal ODE Model to Describe and Differentiate Cancers DYLAN BARTH, CARSON HUEY-YOU, HANA JAAFARI, HOPE MURPHY, MIKE ELLIS, HANA DOBROVONLY, None — The state of mathematical models that describe tumor growth is at best chaotic; an abundance of models and a sub-par collection of data to support them have led to a conundrum when it comes to choosing a model. Our research aims to attribute one of seven extant models to different strains of cancer and to describe the factors that go into choosing one model over another. After gathering data from biological papers, we fit seven well known models that claim to describe tumor growth to the datasets. We then used a categorical chi-squared test to determine which model best described different strains of cancer. This work will help guide modellers in developing accurate mathematical models for different strains of cancer.

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None

Date submitted: 28 Sep 2015

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