

Abstract Submitted
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Assessing ODE models of tumor growth HANA DOBROVOLNY,
HANA JAAFARI, MICHAEL ELLIS, Texas Christian University — Mathematical models are often used to study and optimize treatment of cancer. In order to accurately predict the efficacy of a particular treatment, the model must correctly describe tumor growth. Over the years, several differential equation models of tumor growth have been proposed and independently fit to experimental data sets. While all the models provide reasonable fits to tumor growth data, the models have never been confronted with the same experimental data to determine whether any of the models provides a more accurate description of tumor growth. We collected tumor growth data from the literature and fit the various tumor growth models to the data to determine which model best describes tumor growth. Our results indicate that no single model can capture the variety of growth behavior captured in experiments.

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