1163-92-255 **Tin Phan*** (tin.t.phan@asu.edu), **Justin Bennett**, **Taylor Patten**, **Yang Kuang** and **Eric J Kostelich**. *Model Preselection in Precision Medicine for Prostate Cancer.*

The representation of a patient's characteristics as the parameters of a model is a key component in many studies of personalized medicine. In this context, the underlying mathematical models are used to describe, explain, and forecast the course of treatment. On the other hand, useful insights obtained from these models by means of analysis are deemed too abstract to be utilized as a part of its application. By incorporating known observations of mathematical models within the existing framework of Markov Chain Monte Carlo for the study of parameter identifiability, we develop a new approach to predict the effectiveness of treatment specific to a patient. We demonstrate this approach using several well-studied models of prostate cancer. (Received August 30, 2020)