

1135-VN-2271 **Duane C Harris*** (dharri31@asu.edu) and **Eric Kostelich**. *Predicting Androgen Resistance in Prostate Cancer Using a Kalman Filter.*

I will describe a study of observing system simulation experiments concerning prostate cancer populations undergoing intermittent androgen suppression therapy. Synthetic data is generated by one model (assumed to be a perfect model of the tumor) and assimilated (using a Kalman filter) by a different model. The talk will assess the effect of systematic model errors on the ability of the filter to predict the progression of the tumor (as measured by PSA levels) over periods of 1-3 months. (Received September 25, 2017)