1163-F1-926 **Raegan Higgins*** (raegan.higgins@ttu.edu), Texas Tech University, Department of Mathematics & Statistics, Lubbock, TX 79402-1042, **Casey J Mills** (casey.j.mills@ttu.edu), Texas Tech University, Department of Mathematics & Statistics, Box 41042, Lubbock, TX 79409-1042, and **Angela Peace** (a.peace@ttu.edu), Texas Tech University, Department of Mathematics & Statistics, Box 41042, Lubbock, TX 79409. *Modeling Intermittent Hormone Therapy for Prostate Cancer using Dynamic Equations on Time Scales.*

Prostate cancer is often treated by intermittent androgen deprivation therapy which requires patients to shift between periods of androgen suppression treatment and no treatment. Prostate-specific antigen levels are used to track changes in tumor volume of prostate cancer patients undergoing this therapy. Traditionally, continuous ordinary differential equations are used to estimate prostate-specific antigen levels. In this presentation, we will use dynamic equations to estimate these levels and construct a novel time scale model to account for both continuous and discrete time simultaneously. This accounts for pauses between treatment cycles during intermittent androgen deprivation therapy. We compare our model to data sets of prostate-specific antigen levels to determine any similarity between on treatment intervals and those in our time scale. (Received September 14, 2020)