

1116-VC-2820 **Ilyssa A Summer***, PO Box 873901, Tempe, AZ 85287, and **Angela Peace** (a.peace@ttu.edu), Texas Tech University, Department of Mathematics and Statistics, Lubbock, TX 79409.

Virotherapy and Immunotherapy Combinations towards Cancer. Preliminary report.

Oncolytic viruses are a form of cancer treatment used to target tumor cells without harming healthy cells. These viruses have been engineered to specifically infect and kill cancer cells. Immunotherapy boosts the body's natural defenses towards cancer. This combination is shown through a deterministic system of nonlinear differential equations, for gaining insight into the viral and immunological cancer interactions. Key simulation results will be shown. (Received September 22, 2015)