1127-92-295   **Rebecca A Everett**, Raleigh, NC 27695, **John D Nagy**, Scottsdale, AZ 85256, and **Yang Kuang*** (`kuang@asu.edu`), Tempe, AZ 85287. *Dynamics of an Ovarian Cancer Growth and Treatment Model with Time Delay.*

We present a delay differential equation model that describes ovarian tumor growth and tumor induced angiogenesis, subject to on and off anti-angiogenesis treatment. The tumor growth is governed by Droop's cell quota model, a well established mathematical expression developed in ecology. Here, the cell quota represents the intracellular concentration of necessary nutrients provided through blood supply. We present mathematical analysis of the model, including a detailed study of local and global stability of equilibria. The mathematical model can be employed to fit both on-treatment and off-treatment preclinical mice data using the same biologically relevant parameters. We also present an open mathematical question. (Received February 06, 2017)