Ovarian cancer is the fifth leading cause of cancer death among women in the United States with 21,800 new cases and 13,850 deaths in 2010. 75% of women have metastasized disease at the time of diagnosis and five year survival rate of less than 30%. In order to evaluate the effectiveness of proposed screening strategies in silico we have developed a multitype branching process model of ovarian cancer and calibrated the model by comparing its predictions with published studies and the SEER data base. (Received September 07, 2011)