

Final equations:

$$\frac{dN}{dt} = rN((\gamma_1 - \delta_1)(1 - (\frac{\frac{v_3}{a_3} - O_2(N, M)}{cp})) - p_3) \quad (1)$$

$$\frac{dM}{dt} = rM((\gamma_2 - \delta_2)(1 - (\frac{\frac{v_3}{a_3} - O_2(N, M)}{cp}))) + rN(2p_3 + p_2) - MsI \quad (2)$$

$$\frac{dI}{dt} = r_i M(1 - \frac{I}{I_H + RecruitMI}) \quad (3)$$

Driver Feedbacks to Cancer:

$$\delta_2 = \delta_2(\frac{1}{1 + \frac{d_t}{mut}} MFeedback_\delta) \quad (4)$$

$$\gamma_2 = \gamma_2 + \gamma_2(\frac{MaxGammaAdd}{1 + \frac{d_o}{mut} MFeedback_\gamma}) \quad (5)$$

Driver Feedbacks to Immune system:

$$S = S \frac{1}{1 + MInsensitive} \quad (6)$$

$$Recruit = Recruit \frac{1}{1 + EM} \quad (7)$$