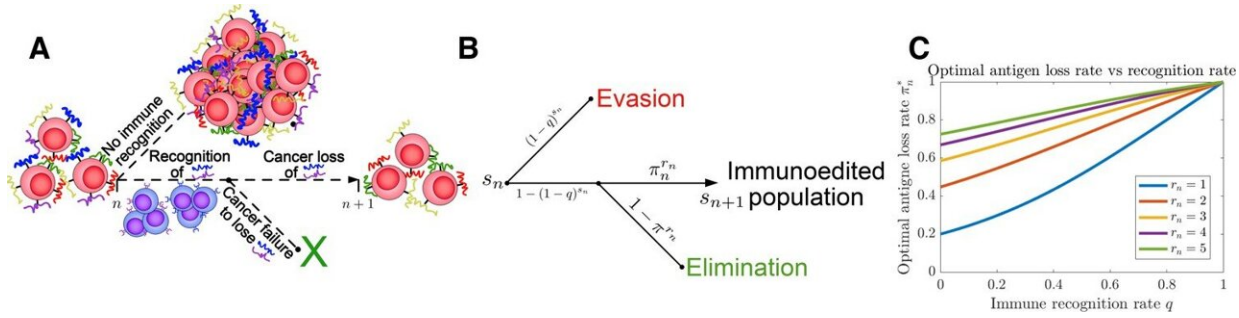
Cancer cells may sense immune surveillance and actively adapt

April 25 2023



Tumor Evasion via adaptive Antigen Loss (TEAL) model. (A) Illustration of tumor antigen detection and downregulation in the TEAL model of cancer-immune interaction. (B) The directed graph with nodes representing the states of the TEAL model and edges labeled based on the probability of their occurrence. The interaction leads to elimination, equilibrium, or escape. Both evasion and elimination are absorbing states, and the equilibrium state results in repeated interaction. (C) Plots of single-period cancer optimal antigen loss rates π* given by Equation 8 are plotted as a function of recognition rate q for various numbers of recognized antigens 0