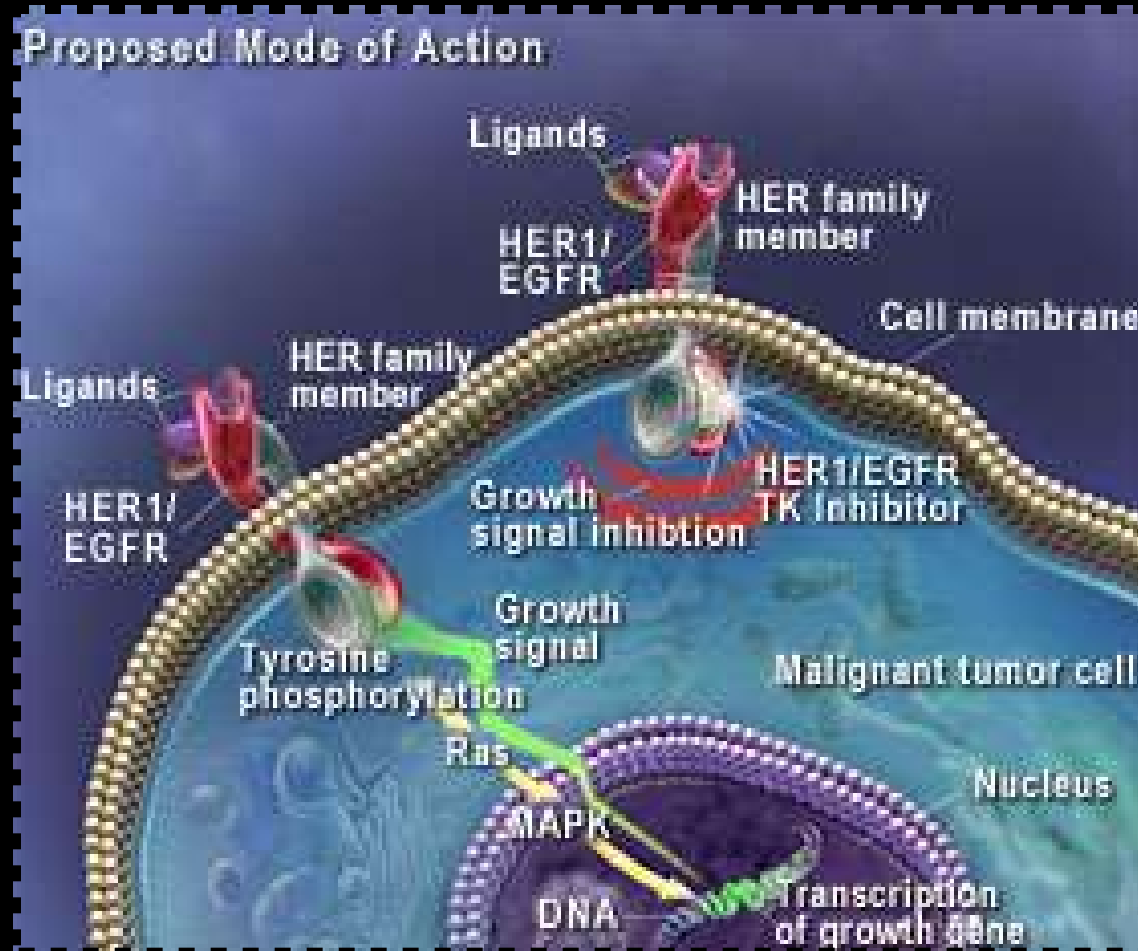


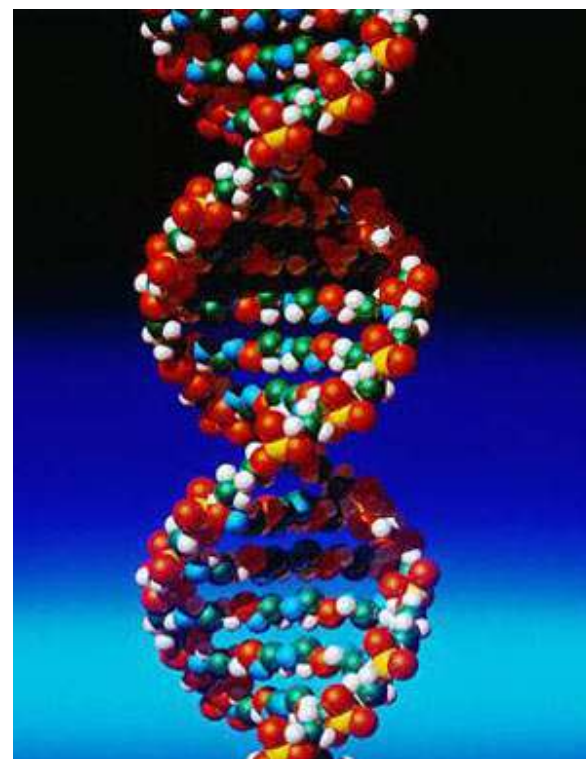
Controlling a Killer Malfunction

By: Brady Sebo, Tom Fish, Addela Marzofka, and Colton Cummings



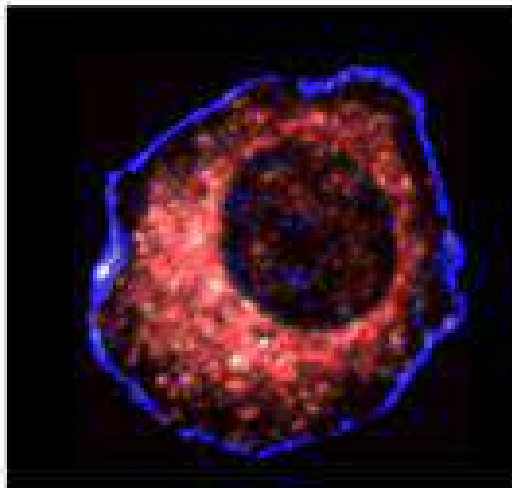
Big Picture

- About 1.2 million people are diagnosed with cancer each year.
- Cancer happens by invading their cells and causing corruption in the nuclei, and sometimes is caused by cells going bad not always for a particular reason.
- A mutation in the cells DNA.

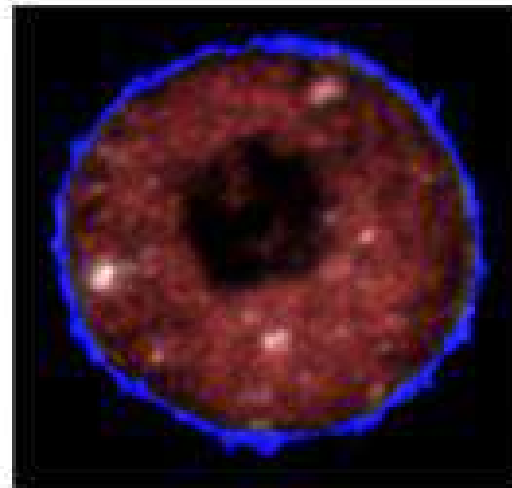




Normal



Cancer

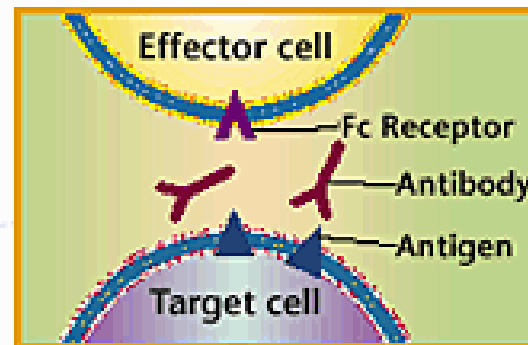




Breast
Cancer
Cell



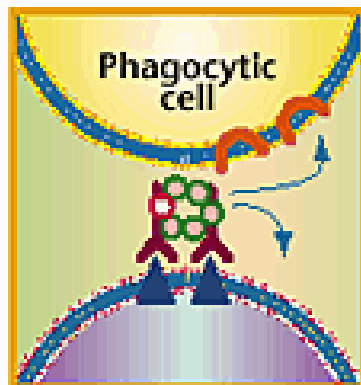




Baseline state

No effector cell engagement
No complement activation
No signalling

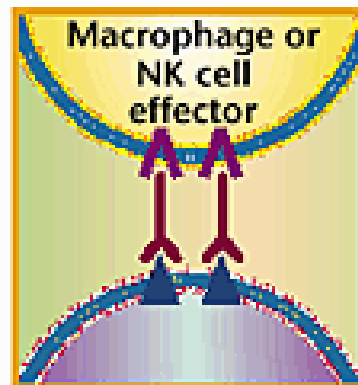
①



1. Fix complement: initiate opsonization, lysis, inflammation.

Protection from tumor

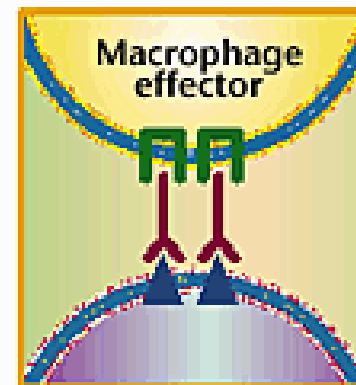
②



2. Crosslink FcγRIII. Initiate ADCC and cytokine release.

Protection from tumor

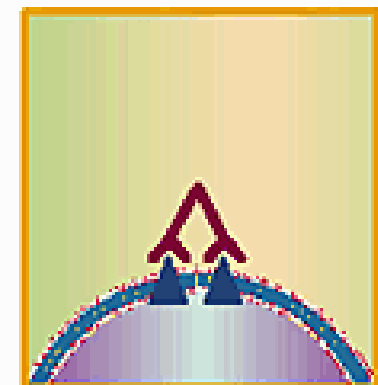
③



3. Crosslink FcγRII. Inhibit effector cell.

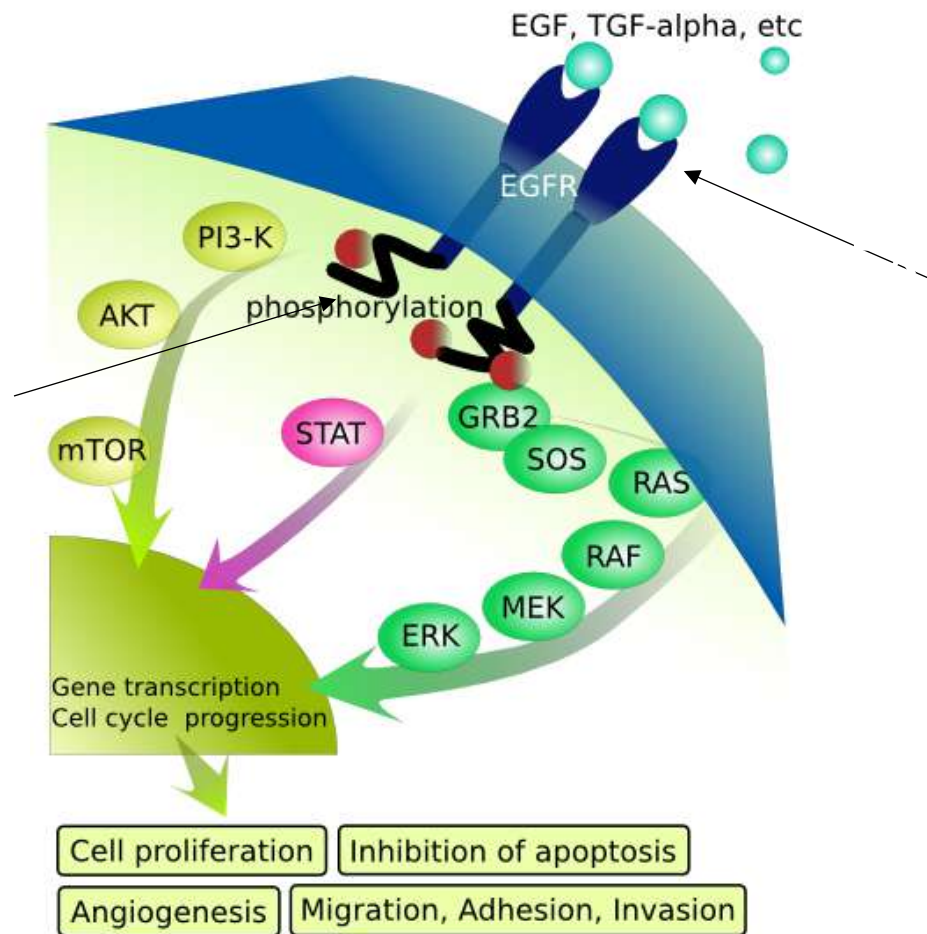
No protection from tumor

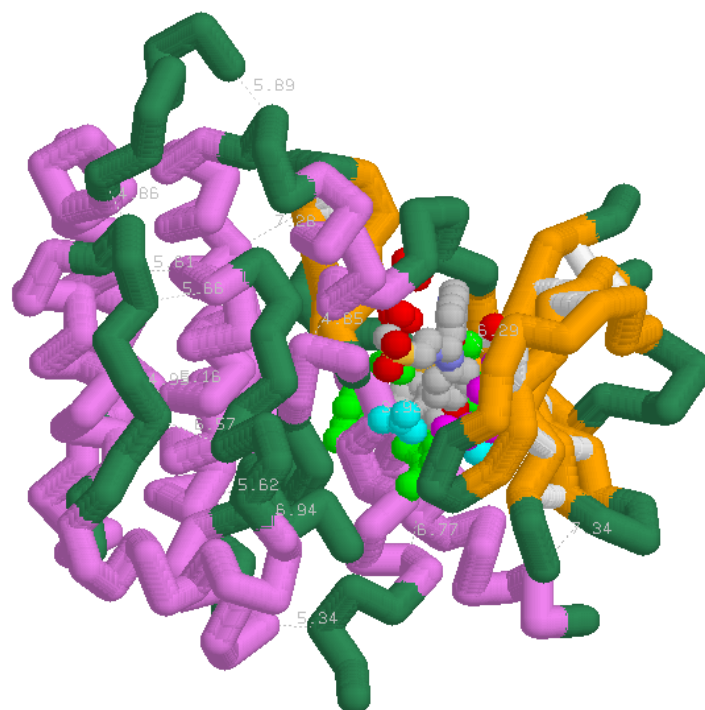
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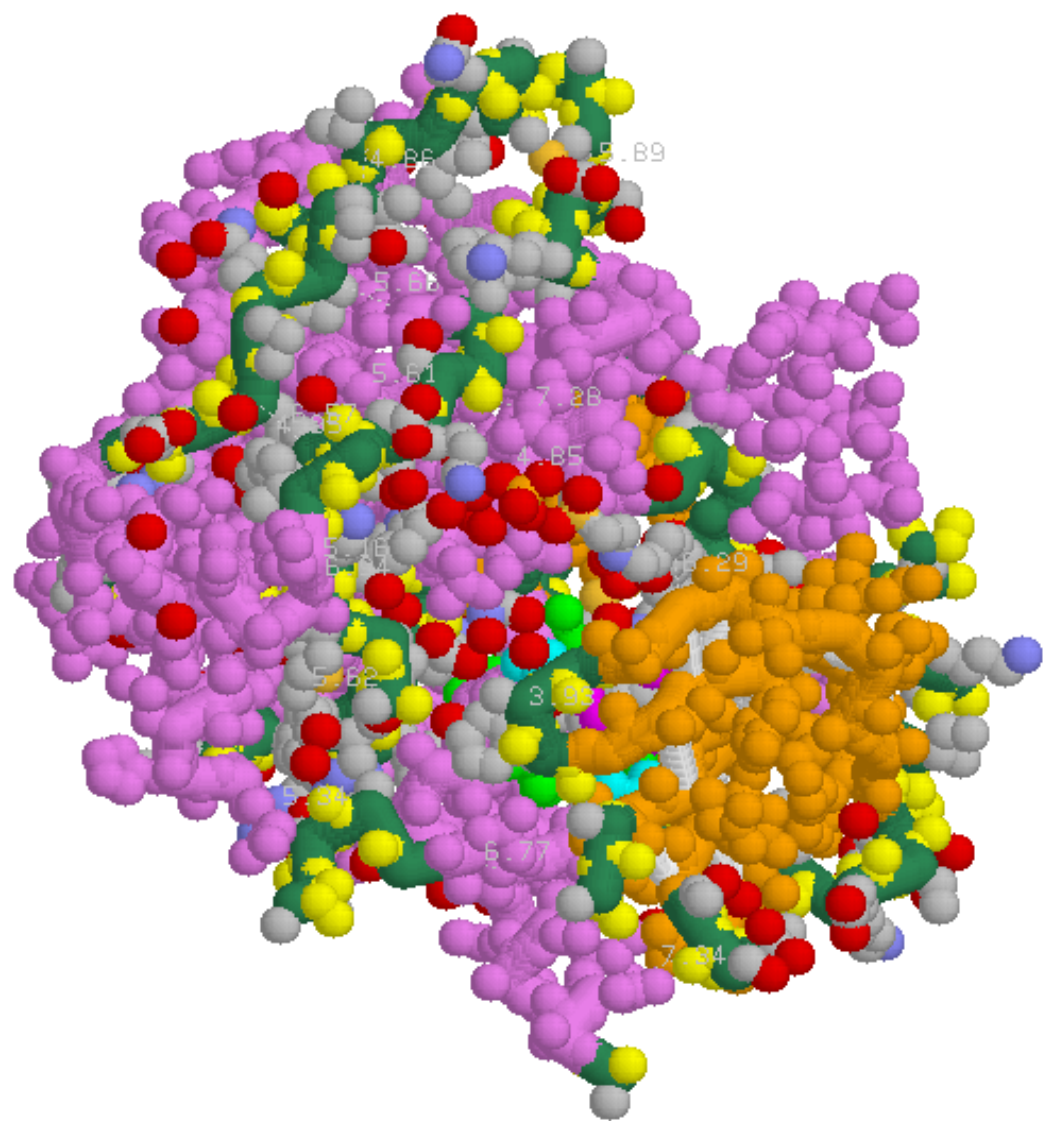


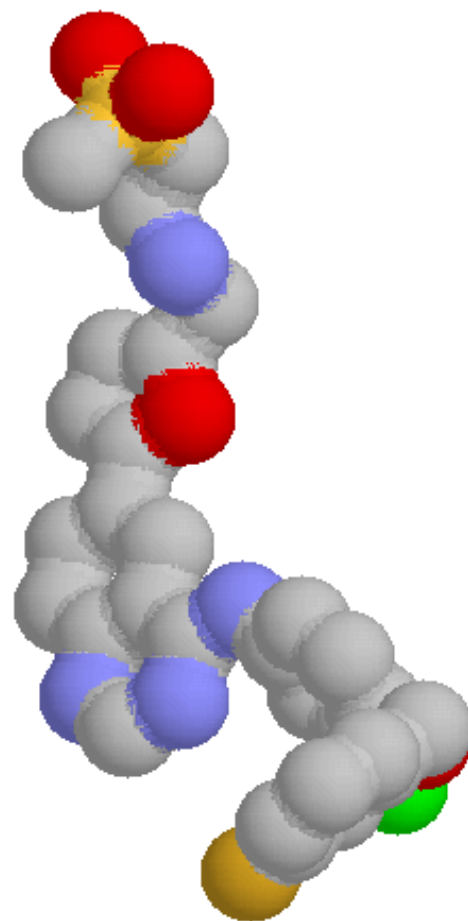
4. Crosslink antigens on cancer cell. Initiate signals, block growth or survival.

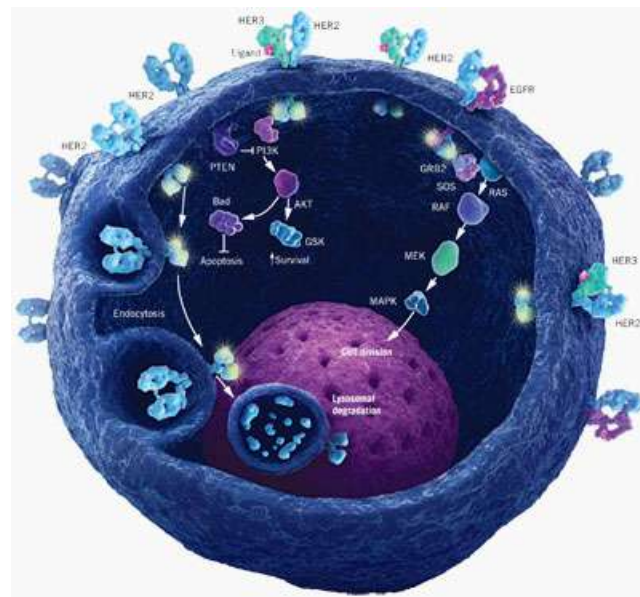
Protection from tumor

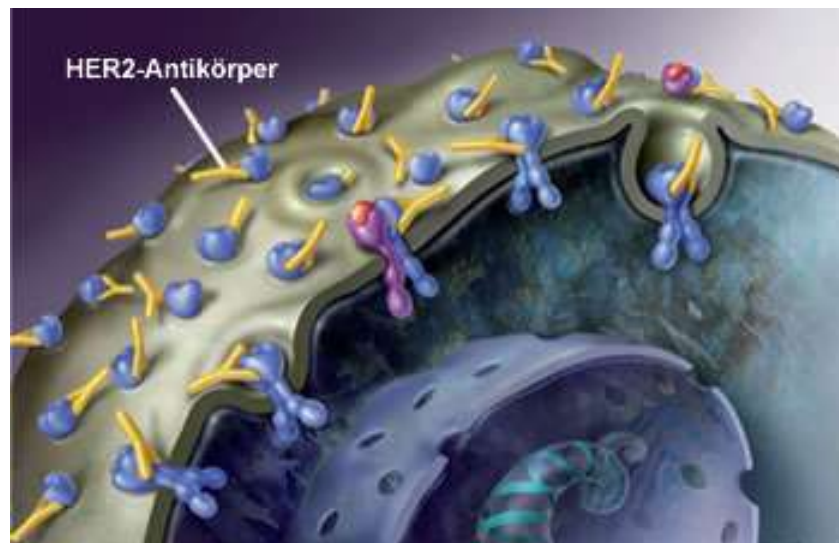


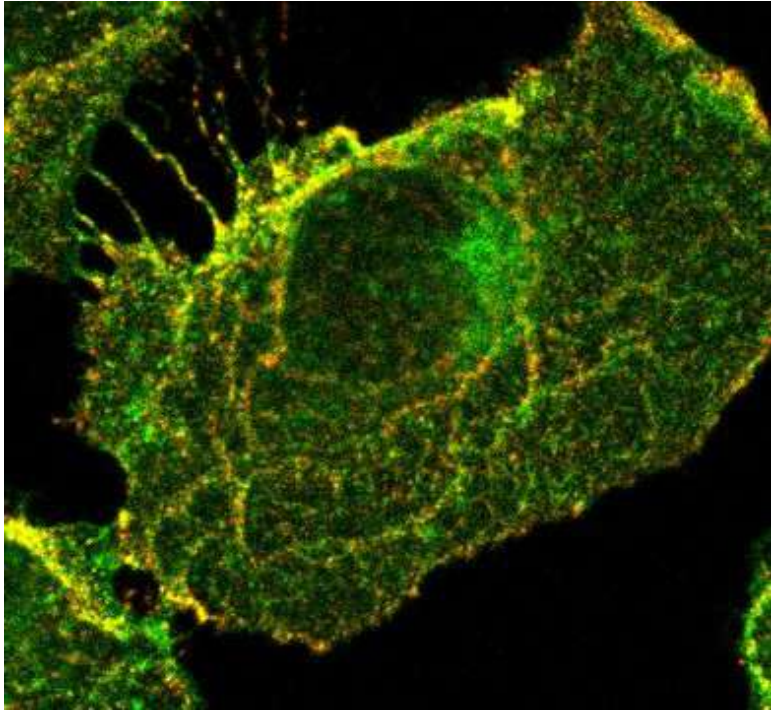


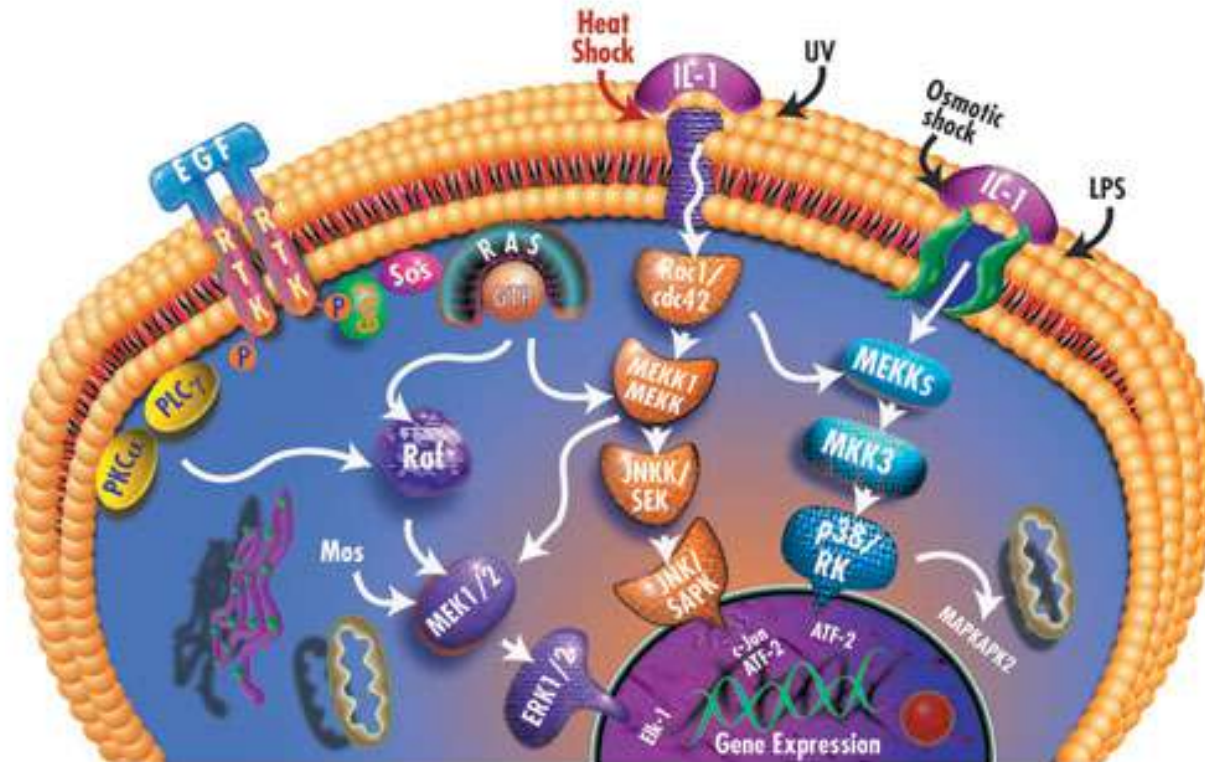












Cell Dividing
Uncontrollably



Tumor on Healthy Cell

