

Targeted

DNA Damage Response

Phenotype

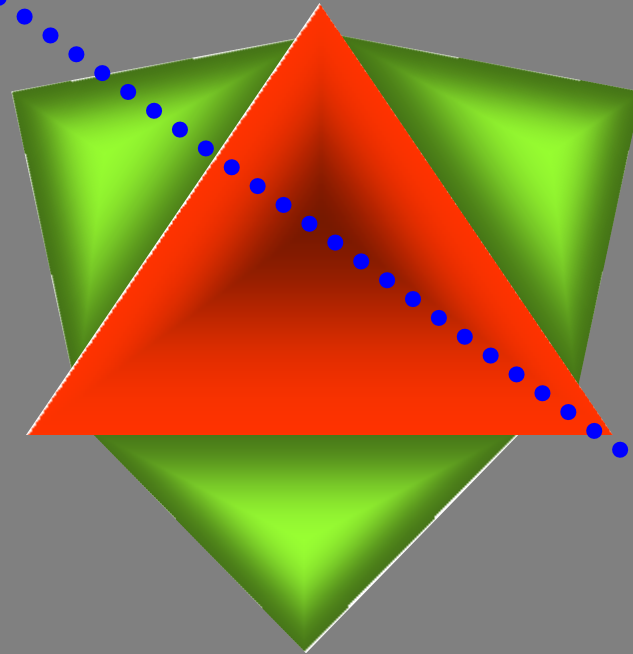
Tissues

Mutation

Survival

Intercellular Signaling

Non-Targeted



Targeted vs Non-Targeted Radiation Effects

- Targeted effects are proportional to radiation dose, e.g. cell kill
- The dose dependence of non-targeted effects are more like switches rather than rheostats
- Both contribute to cancer risk

What is the Utility of Incorporating NTE into Risk Paradigms?

- NTE are the mechanistic basis of non-cancer health effects
- Necessary for the biological veracity of LNT at low dose/dose rate where epidemiological data are uncertain
- May identify susceptible populations
- Could provide avenues for protection after radiation exposure