

Finding the Right Balance

Establishing Optimal Regulations

Valid Scientific Basis Required to Protect Humans and the Environment

- Many Scientific Disciplines Required
 - Nuclear Physics
 - Health Physics
 - Nuclear Engineering
 - Hydrology
- Disciplines Must be Integrated

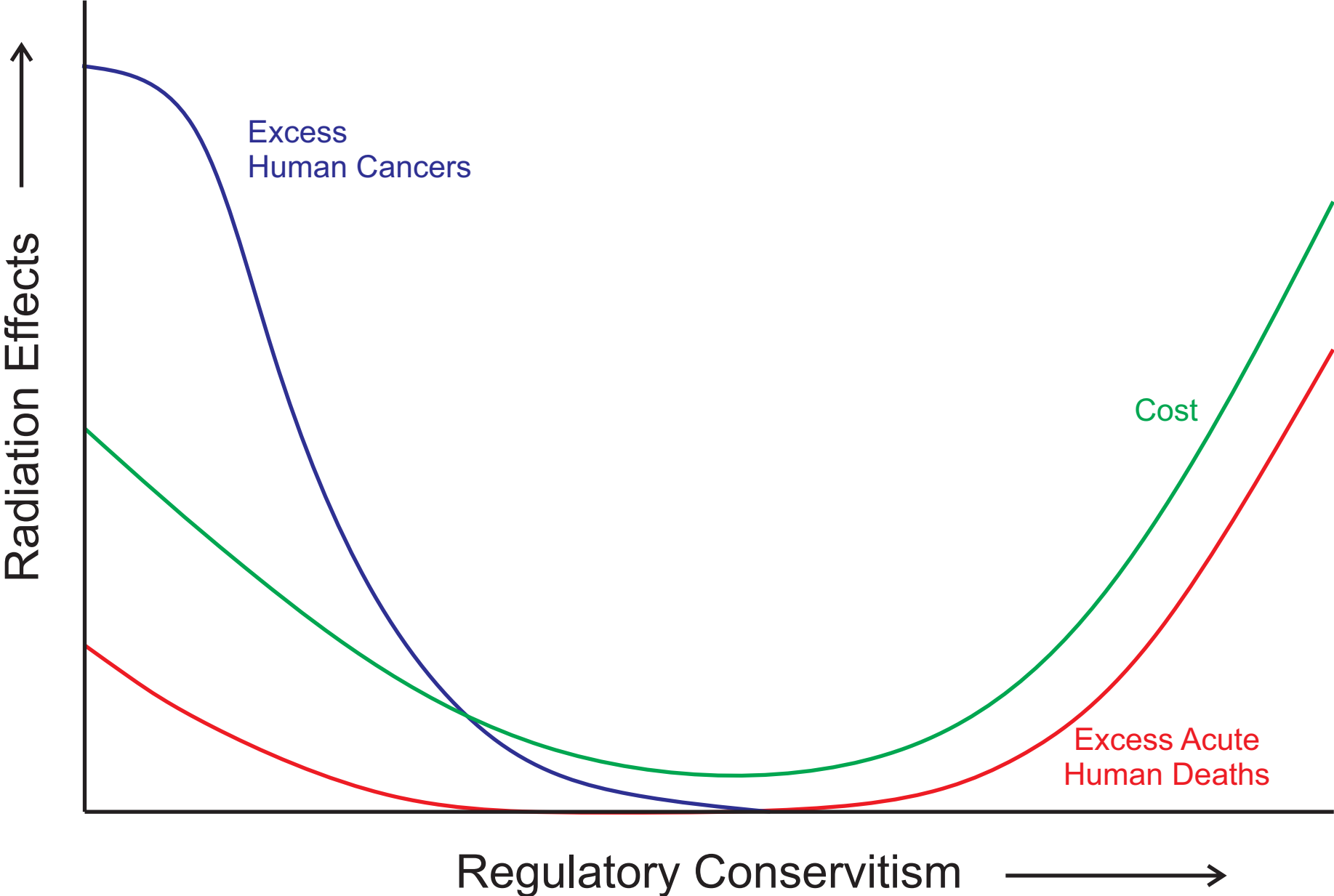
Sociological Parameters Must be Considered

- Population Distribution
- Community Impact
- Public Acceptance
- Regulator Acceptance
- Cost

A Common Agreement With Respect To “Optimal” Must be Established

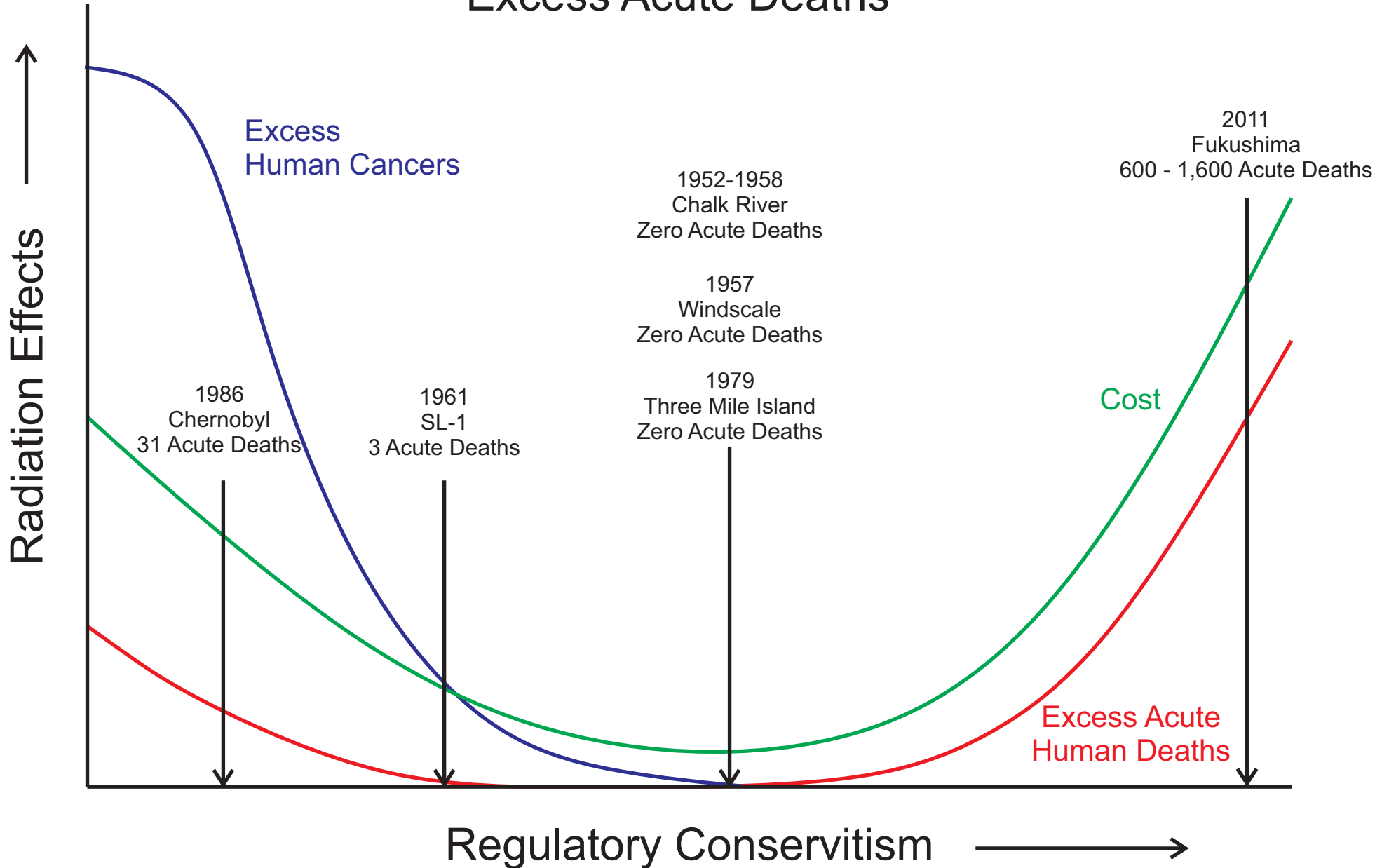
- Is a Death Caused by Unnecessary Evacuation Equivalent to One Caused by Radiation-Induced Cancer?
- How Do We Decide Whether to Spend on Stoplights Near Schools Now or Reducing Cancer 10 Thousand or A Million Years From Now?

Finding the Right Balance



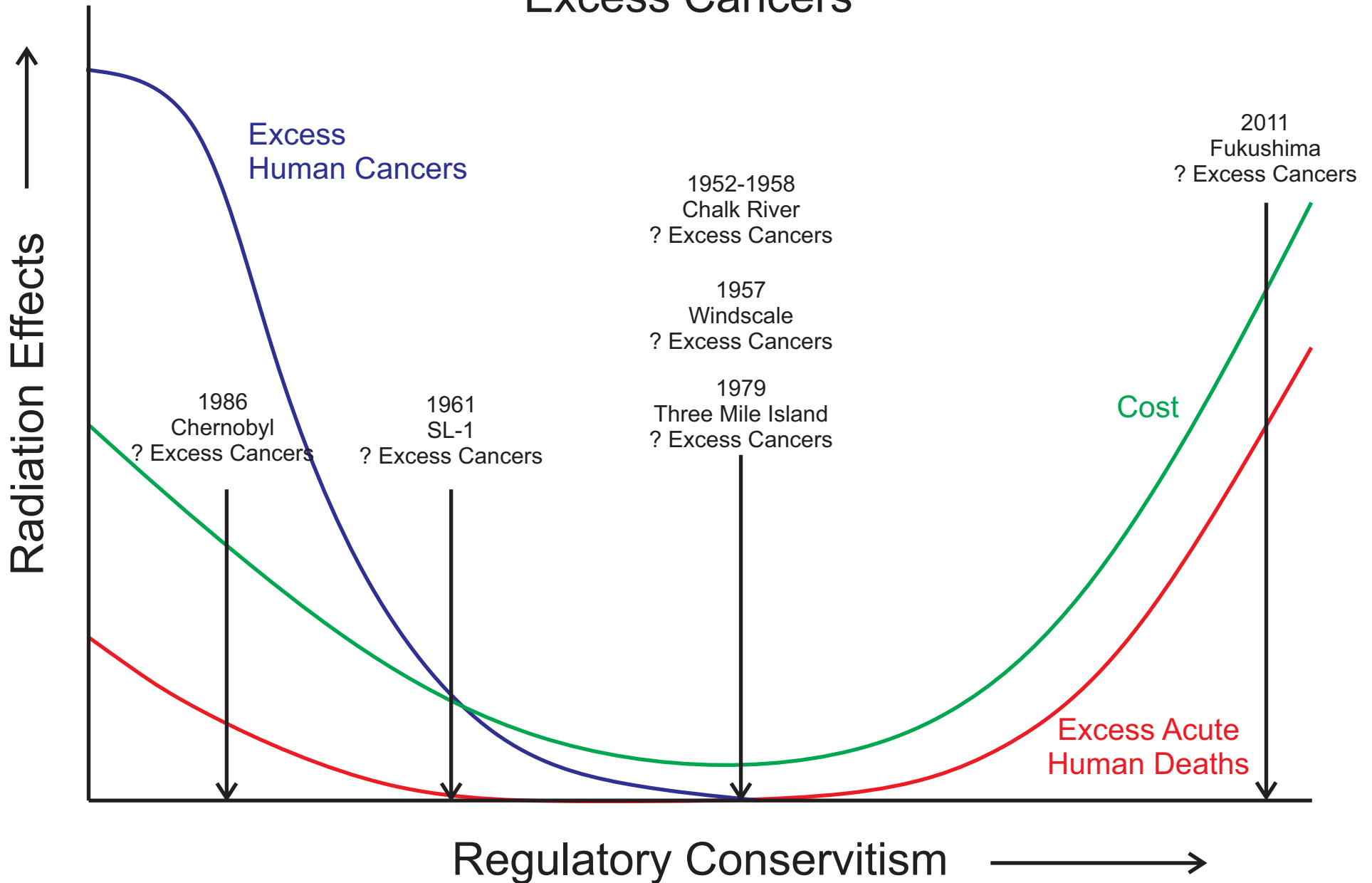
Finding the Right Balance

Excess Acute Deaths



Finding the Right Balance

Excess Cancers



Finding the Right Balance

Excess Acute Human Deaths

Non-Conservative Regulations

- Caused by Accidents
- Fairly Easy to Prevent With Regulations

Optimal Regulations

- No Excess Acute Human Deaths

Excessive Regulations

- Creates Inappropriate Fear of Radiation
- Fear can Cause Panic Resulting in Excess Human Deaths
- Mis-appropriation of Funds Can Drain Public Safety Programs

Excess Human Cancers

Non-Conservative Regulations

- Industrial Exposure and Accidents
- Environmental Releases
- Medical Exposures Excluded

Optimal Regulations

- Excess Human Cancers Comparable to Background

Excessive Regulations

- No Impact

Cost

Non-Conservative Regulations

- Medical Treatment and Cleanup

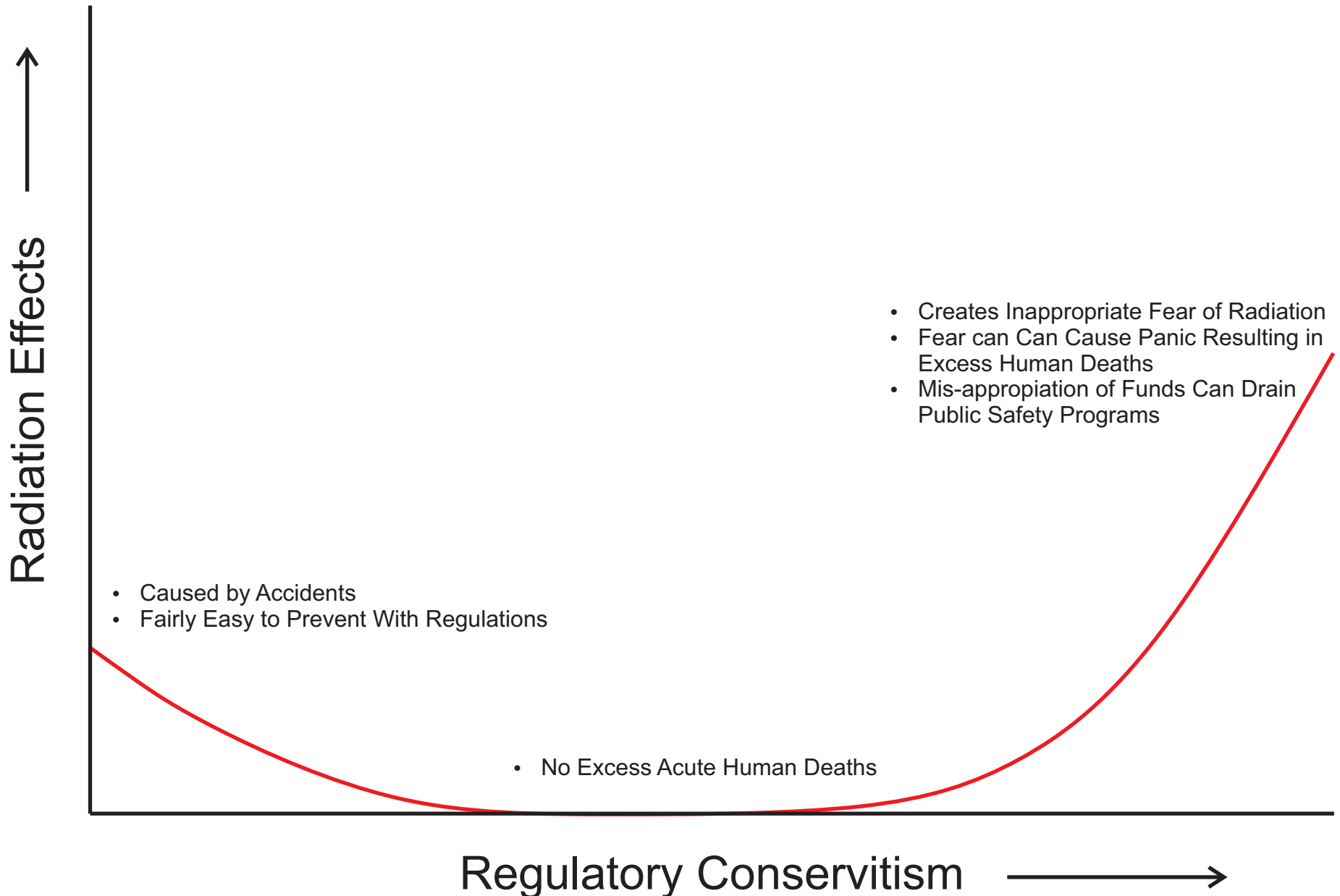
Optimal Regulations

- Regulatory Administrative Costs

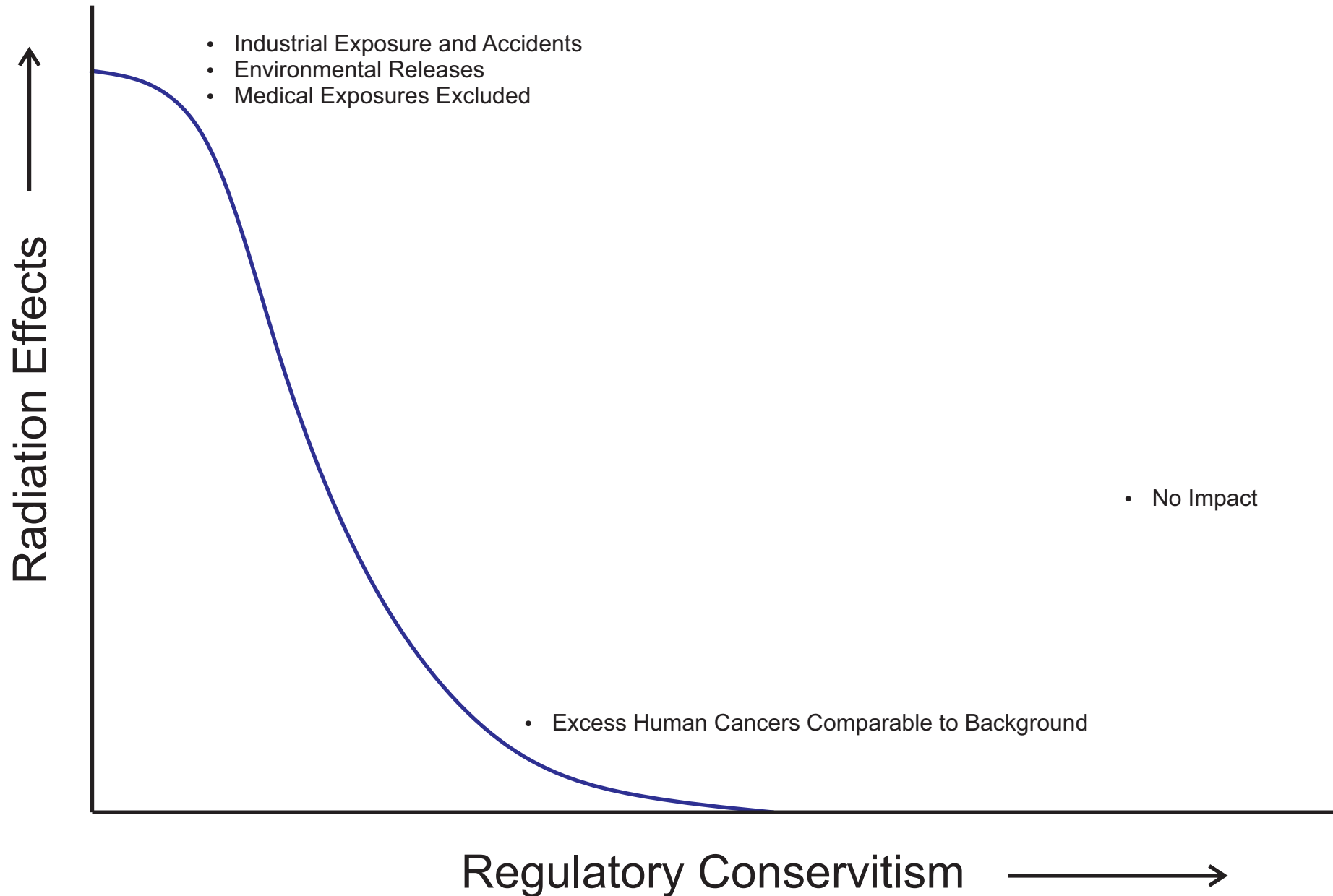
Excessive Regulations

- Unnecessary Evacuations and Cleanup
- Unnecessary Waste Treatment
- Unnecessary Site Remediation

Excess Acute Human Deaths



Excess Human Cancers



Cost

