

# **A Method for Estimating the Benefits of Avoiding Toxicological Endpoints on the Pathway to Cancer that Non-experts Do Not Understand**

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# Problem

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- ① Cancer risk assessment often relies on ‘critical effects’.
  - Variable and often subjective
  - Used as proxies for cancer in regulation.
- ① Regulatory BCA assumes
  - ‘critical effects’ indistinguishable from cancer
  - cancer indistinguishable from premature mortality
- ① BCA needs WTPs for ‘critical effects’

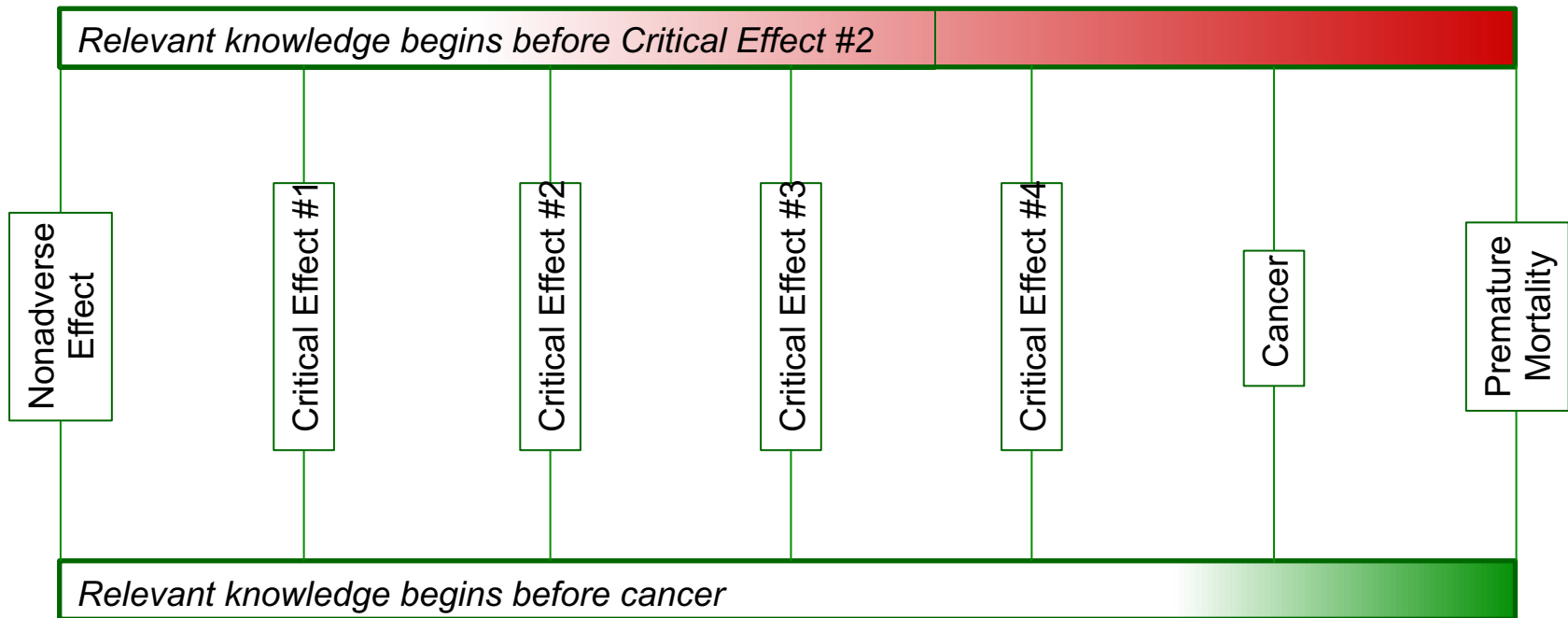
# Solution

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- ③ Use all relevant information to develop credible, expert-based WTP estimates for ‘critical effects’
- ③ Method:
  1. Toxicologists locate critical effects on cancer pathway.
  2. Toxicologists to estimate WTPs for critical effect.
  3. Derive fractional WTPs for critical effects and cancer.
  4. Derive fractional WTPs relative to premature mortality.
  5. Apply fractional WTPs for critical effects as weights to population WTP for premature mortality.

# Step 1: Survey toxicologists to locate critical effects ordinally on cancer pathway

## Hypothetical cancer toxicologist



## Hypothetical non-expert consumer