The Health Risk Assessment / Health Risk Management Paradigm

Scientific data

Epidemiologic studies (Clinical Studies) Rodent studies Mechanistic experiments \leftrightarrow

Exposure Monitoring

Environmental Fate and transport **Modeling**

Problem Formulation

• Discussions Among "Risk Assessors," "Risk Managers," and "Stakeholders"

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Risk Assessment

- · Hazard Identification
- Dose Response Assessment
- Exposure Assessment
- · Risk Characterization



Risk Communication

 More Discussions Among Risk Assessors, Risk Managers, and Stakeholders



Risk Management

• Evaluation of Public Health, Social, Economic, Political, Engineering Factors

Decision or Action

No Action Information Programs Economic Incentives Ambient Standards Pollution Prevention Chemical Substitution Chemical Ban Quantitative Health (Cancer) Risk Assessment: Interpretation, and interpolation.

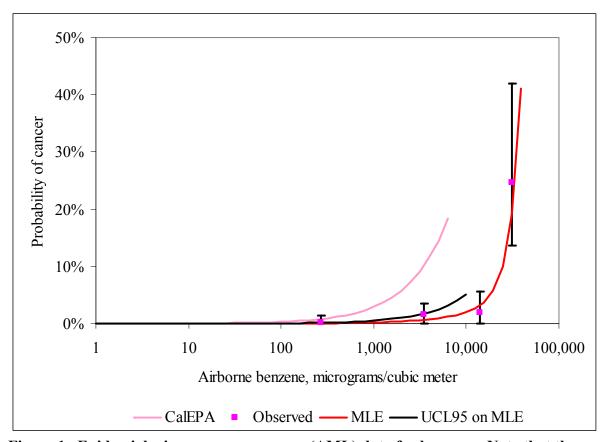


Figure 1. Epidemiologic exposure-response (AML) data for benzene. Note that the x-axis is a log-scale.

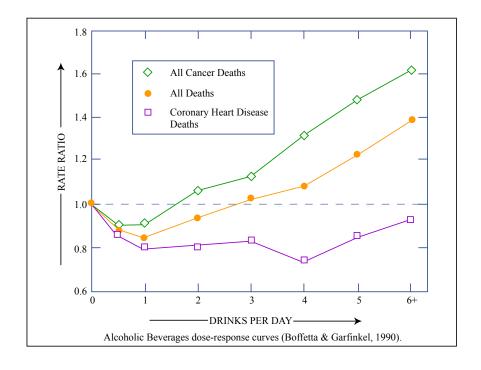


Figure by MIT OCW.