



Arsenic Cancer Risk Assessment: Importance of Using the Best Science

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Presenting on behalf of Rio Tinto

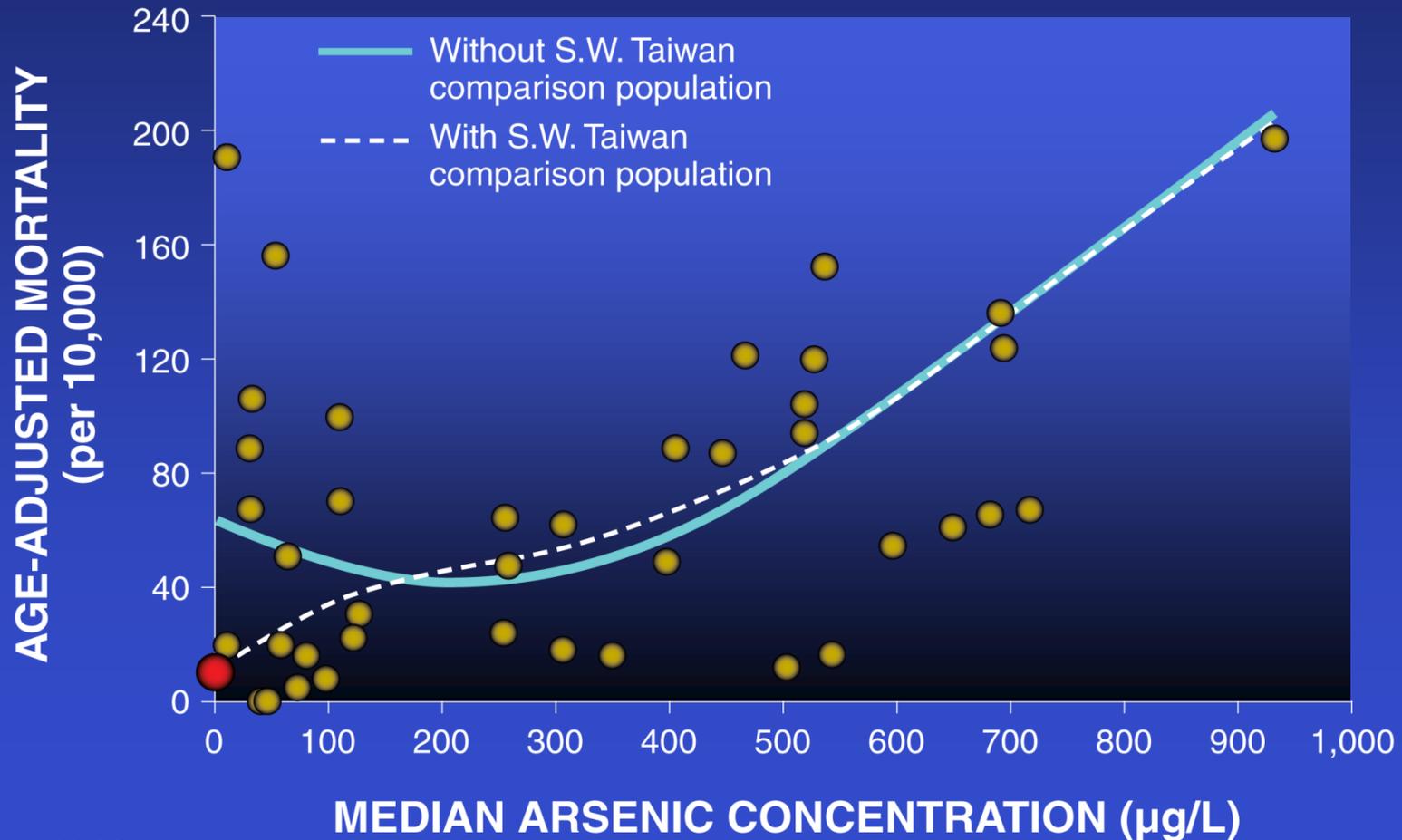
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Summary of Points

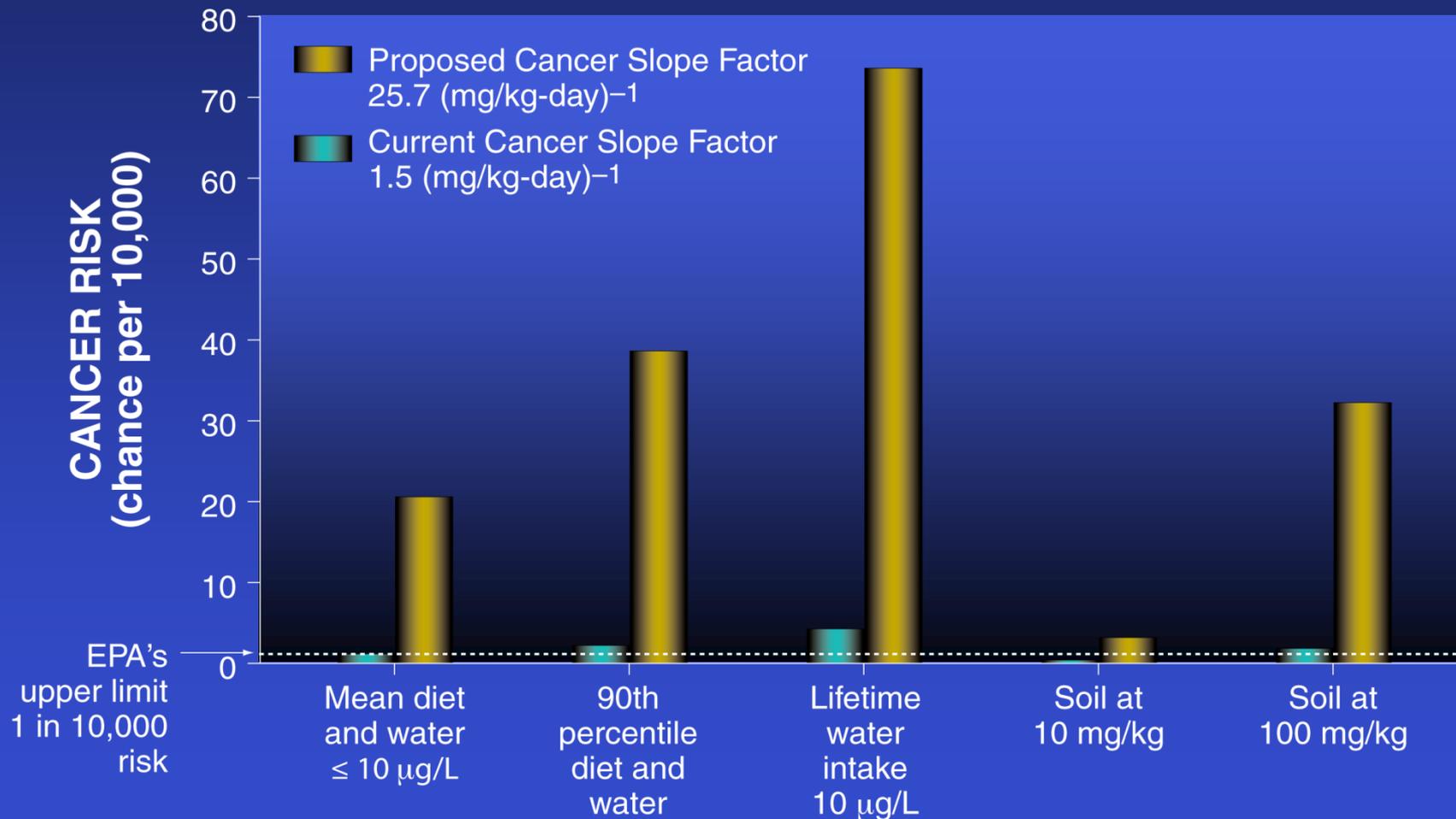
- **Proposed cancer slope factor is essentially based on linear extrapolation between two points: risk at high doses and a zero-dose comparison population**
- **A wealth of evidence from epidemiological studies (including SW Taiwan) as well as mode of action studies indicates much lower risks than predicted at low doses**
- **An overly conservative approach that does not use the weight of scientific evidence can have serious public health consequences**

Effect of Comparison Population on Dose-Response

- Female bladder and lung cancer risk



Increase in Arsenic Risk Estimates With the Proposed Cancer Slope Factor



Too Hazardous to Eat?

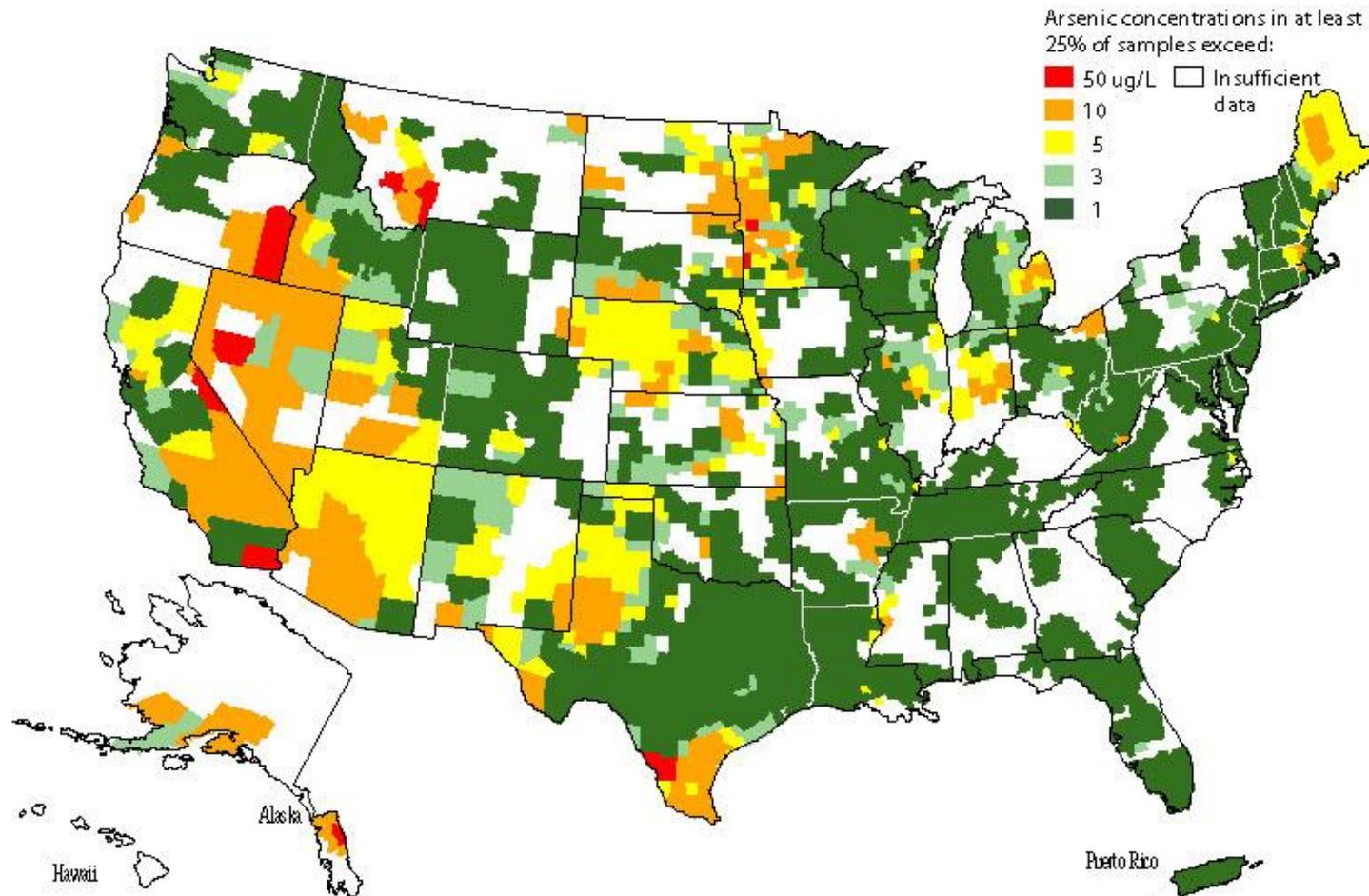
- **Wheat flour**
- **Rice**
- **Corn meal**
- **Peanut butter**
- **Apple juice**
- **Grapes**
- **Cucumber**
- **Lettuce**
- **Spinach**
- **Onion**
- **Carrots**
- **Sugar**
- **Dry table wine**
- **Tap water**

More than 1 g/day of any of these items over a lifetime exceeds a 1 in-a-million risk



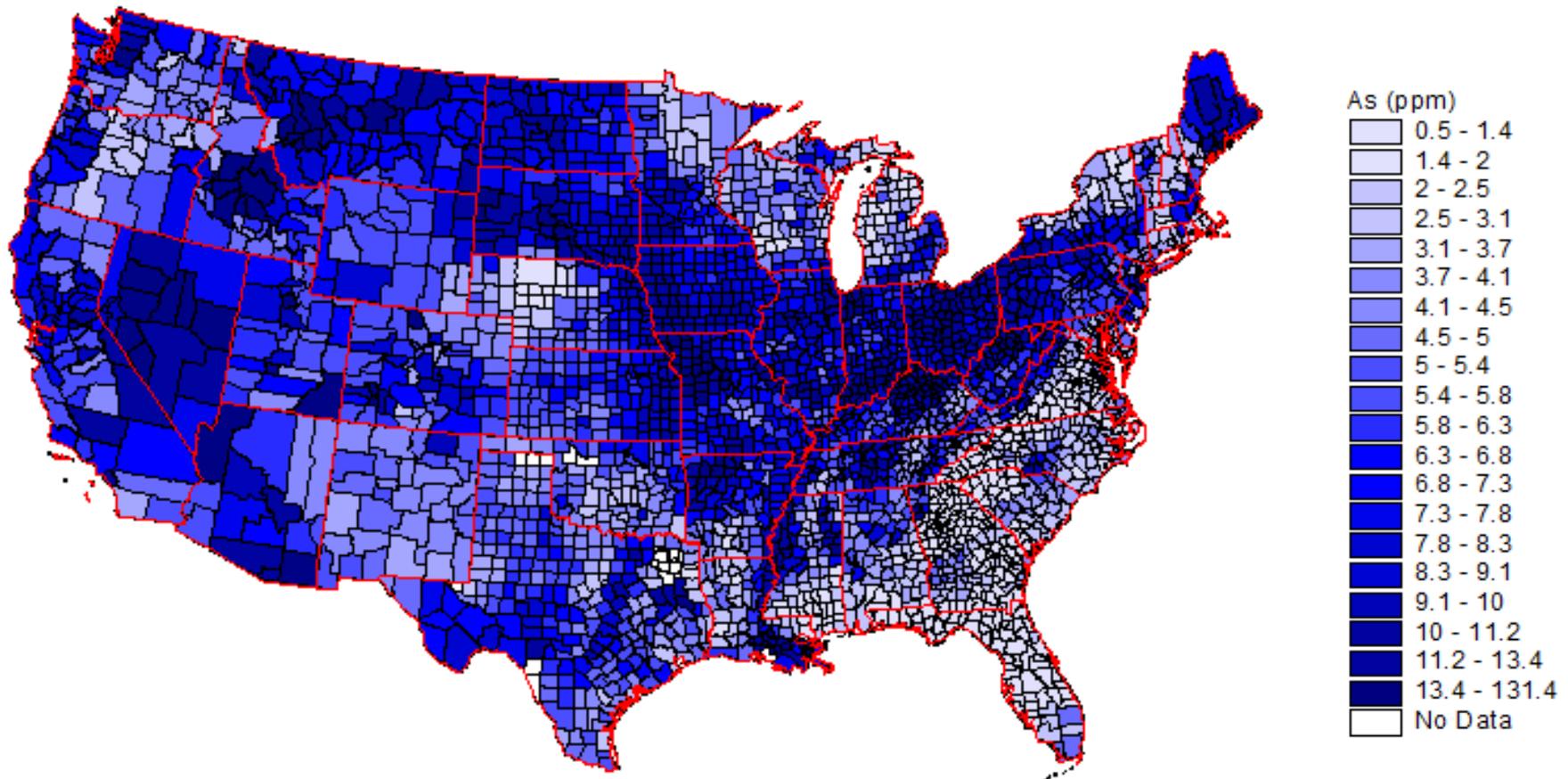
Can We Drink the Water?

- 0.1 ppb will have a 1 in 10,000 risk



Where is it Safe to Live?

- New EPA soil screening level = 0.023 ppm



Conclusions

- **Considerable recent epidemiology and toxicology data are available to assess cancer risks of arsenic at low doses**
- **Use of the weight of scientific evidence in risk assessment is of great importance to inform public health decisions**