
Cancer risk valuation: To treat, or to prevent, that is the question!

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Abstract

We present an integrated model of cancer risk valuation. The model extends the standard one-period value-of-statistical-life model to three health prospects: healthy, ill, and dead. We derive willingness-to-pay values for prevention efforts that reduce the cancer incidence rate as well as for treatments that lower the corresponding health deterioration and mortality rates. We find that the demand value of prevention always exceeds that of treatment. People often overweight small risks and underweight large ones. We use the rank dependent utility structure to explore how the demand for cancer prevention and treatment alters when people evaluate probabilities in a non-linear manner. For incidence and mortality rates associated with common types of cancers, the inverse-S shaped probability weighting found in most experimental studies leads to a significant increment in the demand values of both treatment and prevention.

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