

Novel Approaches to How Patients Value New Therapies

The value of hope

Situation

To date, much of the methodological debate regarding the value of oncology therapy has justifiably focused on choosing the right value for an additional month of survival—often taking into account the quality of life associated with that additional month. While the magnitude of an improvement in health is an important issue, less attention has been paid to the issue of how to quantify the value of the improvement. This issue is important because the total value of a therapy is typically equal to the value placed on improved health, such as a 1-year gain in survival, multiplied by the magnitude of the improvement in health, such as the average gain in survival from a therapy.

Challenges

1. Traditional approaches have ignored the value that patients may place on a therapy with a wider spread of outcomes that offer the potential of a longer period of survival. These “hopeful gambles” are contrasted with “safe bets” that offer similar average survival, but less chance of a large gain.
2. How can we measure whether patients near the end of life like or dislike therapies with greater spread in survival outcomes?

Solution

Precision Health Economics set out to quantify how patients value new oncology therapies through research focused on 2 clinical contexts in advanced cancer: metastatic malignant melanoma and metastatic breast cancer.

- Precision developed a survey instrument that isolated the hopeful aspect of therapy choices resembling several melanoma and breast cancer treatment options
- Surveys were conducted as face-to-face interviews

71% of the melanoma patients surveyed would give up the chance of living 2 years with certainty for a 20% chance of living for at least 4.5 years. Similarly, of the breast cancer patients surveyed, 83% would give up the chance of living 1.5 years with certainty for a 10% chance of living 4 years or more

- One survey arm presented participants with a hypothetical scenario for the treatment of advanced melanoma and the other for the treatment of metastatic breast cancer
- Participants were shown key features of the survival profile of the more “hopeful” therapies, including average survival and the likelihood of dying within specific time frames, calibrated to the existing clinical evidence
- Participants then compared the “hopeful” therapy with a hypothetical therapy that provided the same average survival but with death occurring with 100% certainty at the average survival time
- Finally, participants were presented with a set of possible values and asked to identify the maximum value they would willingly pay for each therapy

Results

Our research found that 77% of surveyed cancer patients with melanoma, breast cancer, or other kinds of solid tumors preferred hopeful gambles to safe bets, with a direct correlation of income level to willingness to pay. This suggests that current technology assessments, which often determine access to such cancer therapies, may be missing an important source of value to patients and should either incorporate hope into the value of therapies or set a higher threshold for an acceptable cost-effectiveness ratio in the end-of-life context.

The full article, “How Cancer Patients Value Hope and the Implications for Cost-Effectiveness Assessments of High-Cost Cancer Therapies,” is available in *Health Affairs*, 2012;31(4):676-682.

VALUE OF CANCER SPENDING

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By Darius N. Lakdawalla, John A. Romley, Yuri Sanchez, J. Ross Maclean, John R. Perrod, and Thomas Philipson

How Cancer Patients Value Hope And The Implications For Cost-Effectiveness Assessments Of High-Cost Cancer Therapies

ABSTRACT Assessments of the medical and economic value of therapies in diseases such as cancer traditionally focus on average or median gains in patients' survival. This focus ignores the value that patients may place on a therapy with a wider "spread" of outcomes that offer the potential of a longer period of survival. We call such treatments "hopeful gambles" and contrast them with "safe bets" that offer similar average survival but less chance of a large gain. Real-world therapy options do not have these stylized forms, but they can differ in the spread of survival gains that patients face. We found that 77 percent of surveyed cancer patients with melanoma, breast cancer, or other kinds of solid tumors preferred hopeful gambles to safe bets. This suggests that current technology assessments, which often determine access to such cancer therapies, may be missing an important source of value to patients and should either incorporate hope into the value of therapies or set a higher threshold for an acceptable cost-effectiveness ratio in the end-of-life context.

Darius N. Lakdawalla (dlakdawalla@uci.edu) is director of research at the Leonard D. Scheffler Center for Health Policy and Economics at the University of Southern California (USC) and an associate professor at the university's Price School of Public Policy, in Los Angeles.

John A. Romley is a research assistant professor in the Price School of Public Policy, USC, and an economist at the Leonard D. Scheffler Center. He is also an adjunct economist at the RAND Corporation.

Yuri Sanchez is an economist at the health care consulting firm Precision Health Economics, in Los Angeles, California.

J. Ross Maclean is vice president for Cardiovascular and Metabolic, and Health Services, at Bristol-Myers Squibb, in Plainsboro, New Jersey.

John R. Perrod is director of US Health Services, Oncology, at Bristol-Myers Squibb, in Plainsboro.

Thomas Philipson is the Daniel Levin Chair in Public Policy at the Irving B. Harris Graduate School of Public Policy Studies, University of Chicago, in Illinois.

Controversy continues to surround approaches to measuring the value of health care. The stakes are high for payers, patients, providers, and drug and medical device manufacturers. Nowhere is this lack of consensus more apparent than in the treatment of cancer. Consider, for example, the UK National Institute for Health and Clinical Excellence. This "health technology assessment" agency assesses the medical and economic value of therapies, and it makes recommendations that may guide coverage decisions within the UK National Health Service. In response to pressure from patients and policy makers, the agency recently carved out an exception from its standard procedures by allowing a more generous threshold for therapies used when life expectancy is short. This carve-out could apply to some cancer therapies.¹ To date, much of the methodological debate regarding the value of oncologic therapy has justifiably focused on choosing the right value for an additional month of survival, often accounting for the quality of life associated with the additional month. The value of an improvement in health is an important issue, but less attention has been paid to the issue of how to quantify the magnitude of the improvement. This latter issue is also important because the total value of a therapy is typically equal to the value placed on improved health—such as a one-year gain in survival—multiplied by the magnitude of the improvement in health—such as the average gain in survival from a therapy. Researchers have generally assumed that patients and policy makers care about the average or median gain in survival, or quality-adjusted survival.² However, economists, psychologists, and other social scientists have long understood that people care about risk. For example, handing \$100 to a consumer is different from offering a coin flip that earns \$200 for heads but nothing

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