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

---

**CASE STUDY**

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.