PREFERENCES OF PATIENTS WITH METASTATIC BREAST CANCER: A MARKET RESEARCH INITIATIVE TO UNDERSTAND THE PATIENT PERSPECTIVE ON THE RISK-BENEFIT TRADEOFF IN THE TREATMENT DECISION

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ABSTRACT 

KEY QUESTIONS/AIMS OF THE PROJECT
- How would biomarkers influence patient decision making?
- How do patients weight the risks and benefits of treatment during decision making?

OVERVIEW OF STUDY METHODOLOGY

- Biomedical tests and questions designed to elicit views on the trade-off between benefit and side effect (Low benefit/High side effect).
- Respondents were asked about their original cancer diagnosis and experiences to provide a basis for comparing subgroups. Those “new” (10% of the sample) preferred treatment/no treatment.
- Respondents who were considering a cardiac side effect are less likely to treat as side effect likelihood worsens, differ. Those considering cardiac side effects are more likely to move towards “no treatment” as side effect likelihood worsens.

SURVEY FINDINGS

- The chart below shows the predicted likelihood of choosing a treatment with the characteristics specified.
- As expected, side effects are higher for higher benefit or lower toxicity.
- It is also notable that each curve has a slightly different shape. For instance, at very low benefit (10%), even a doubling of side effect (from 20% to 40%) has little impact.
- At 40% seems to be an important threshold on both sides. That is, likelihood of taking treatment moves up quite a bit at choices reach 40% likelihood of benefit and at choices get down to 40% likelihood of toxicity.

CONCLUSION

- This effort has shown a high degree of interest in biomarkers and a great desire for information.
- Respondents’ open-end statements express frustration, both with toxicity and the feeling of guesswork or trial-and-error.
- Patients are eager for the type of information that biomarkers are intended to provide.
- The conjoint model gives us an exciting basis to measure and predict patient decision-making in a rigorous manner.
- The model shows anywhere from 19% to 27% of respondents switching from no treatment to treatment as benefit likelihood increases.
- Another hypothetical biomarker predicts toxicity, predicting 30% versus 50% likelihood of side effect. We used the conjoint model to predict how many patients would change their treatment decision if they knew they would be in the 30% versus 50% group. First, we ran the model at 40% toxicity, varying the toxicity from 30% to 50%.

FURTHER INFORMATION CONTACT

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400 Women Answered Questions About Biomarker Tests and Questions Designed to elicit views on the trade-off between benefit and side effect. The results were analyzed using CA methods which provide pairs of hypothetical treatments, such defined by benefit and side effect likelihoods. In each question, respondents select a preferred treatment or no treatment. Analysis of patterns allows prediction of selecting treatment for any combination of benefit and side effect.

RESULTS:
- Preferences survey show greater preference for higher benefit and lower side effect likelihoods. Ranges is from 92% for “best” combination (60% benefit/20% side effect) to 12% for “worse” combination (10% benefit/40% side effect).
- Benefit appears more influential than side effect; selecting treatment more quickly as benefit diminishes and more slowly as side effect increases.

CONJUNCTIVE ANALYSIS

- Conjoint analysis can be used to quantify patient preference with respect to benefit and side effect trade-offs. Predictions and usefulness will be improved by designing conjoint analysis based on specific treatment research questions that have particular side effect profiles.
- Biomarker influence can be modeled using conjoint data.

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