Case Study: Using Real-World Data to Solve Mid-Study Recruitment Challenges for Phase Ib/II Breast Cancer Trial

Health care moves quickly, with a near-constant flux of new ideas, new treatment approaches, and new insights into the molecular and biological behavior of diseases. As a research community, this delights us. We live for change and progress toward better solutions. But a new drug or treatment on the market can also throw a wrench in ongoing research that was not designed to factor in its impact. What is the solution when progress outpaces your ongoing study? Some sponsors are turning to real-world data (RWD) for answers.

Challenge

In the midst of a global, Phase Ib/II randomized study of the safety of breast cancer immunotherapy combinations, a sponsor was struggling with slower-than-anticipated recruitment—and the study team had a pretty strong gut instinct as to why. The sponsor's protocol required eligible patients be treated with a hormone therapy in second-line, which was a popular treatment option at the time the study was designed. However, since then, a CDK4/6 inhibitor had come onto the market. The team suspected this new medication's use in combination with the hormone therapy as first line treatment was the criterion making patients ineligible. To confirm that their hunch was correct, they needed to look at treatment changes over time (specifically, past the point the new CDK4/6 drug entered the market) to determine if they should expand their eligibility criteria to include a third-line treatment.

Solution

Given the fast-moving landscape for breast cancer treatment, the study team needed data that were both recent (ideally within the past two months) and quickly available. Electronic health records (EHRs) were not only timely, but also available in-house to the sponsor with biomarker testing algorithms in place to quickly define breast cancer subtypes. While the sponsor also had claims data available, the team would have had to derive a proxy based on treatments to determine patients' hormone receptor status, so they elected to move forward with EHR data only.

Once they plotted the data, showing trend lines over each year, the study team had their answer: the data showed that indeed there was a substantial uptick in patients taking the newly-marketed therapy, and its use was impacting eligibility. This drove an internal discussion around the risks and benefits of including a third line. Was a protocol amendment merited? The team decided it was. Although the amendment would be costly, the data gave them confidence that the investment would pay off.

Outcomes

This study is still ongoing, but the team expects that recruitment rates have been positively impacted by the decision to extend the third-line treatment. However, even without the metrics in hand, the study team lauds the use of RWD for its ability to give confidence to a decision that previously would have been handled in a less accurate and more time-consuming manner. For example, before RWD was an available solution, the study team would have either based their choice on gut speculation alone or dragged out the timeline by reaching out to the sites for data to validate the change. The use of RWD obviates both.

The Big Picture

No one wants to change course mid-study, but having the data to back up the decision can help make skeptics believers and bring more stakeholders on board with the choice, ultimately benefiting your study. This study team feels that with the onset of new real-world sources that have greater depth of clinical data, study teams are now able to unlock new uses of RWD to help improve clinical trial planning and decision-making.

Success Factors

This sponsor's advice for others hoping to apply RWD to determine eligibility:

- *Embrace Imperfect Data* – Never compromise on quality, but know that RWD can often still be useful even if it is not a one-to-one match with your needs. For example, this sponsor used U.S.-only EHR data even though their study was global. Because their results could be generalizable, the data was still an asset.
- *Develop Resources* – This study needed to make fast decisions, and having the data in-house, with the expertise to analyze it quickly, was a huge time-saver. Make the investment to develop tools like these for your data.
- *Use Your RWD Champions to Drive Change* – In many organizations, the two sets of champions for RWD are leaders at the top (who are seeing it work for their competitors) and scientists at the grassroots level of the team (who know the power of data). Ask them for help convincing the rest that RWD can support better eligibility decisions.

This case study is part of CTTI's Recommendations on Use of Real-World Data to Plan Eligibility