TRIAL TIMELINES

Deriving insights for more accurate trial duration predictions through curated data and benchmarking assets

By Tim Miller, Vice President Product Management & Analytics

Save resources with accurate trial length projections. How analytics based on curated content can deliver insight for clinical strategies.

Clinical studies consume more than 70% of the time and over 90% of the cost of bringing a drug to market. Getting the timing right is key to the success of a clinical program. The trial needs to be long enough to provide statistically significant results; but a trial that gets bogged down in recruitment or protocol amendment increases costs. Delivering behind a competitor program could mean the commercial and regulatory positioning of a candidate needs to be completely revised. Teams engaged in clinical development need to have answers for questions like:

- What would the competitive landscape look like if this program was delayed by 6 months?
- Is the estimate I've given for executing this trial reasonable, given the performance of other similar trials?
- Is a new trial of a drug in my indication likely to change the success factors for my trial?

APPROACH

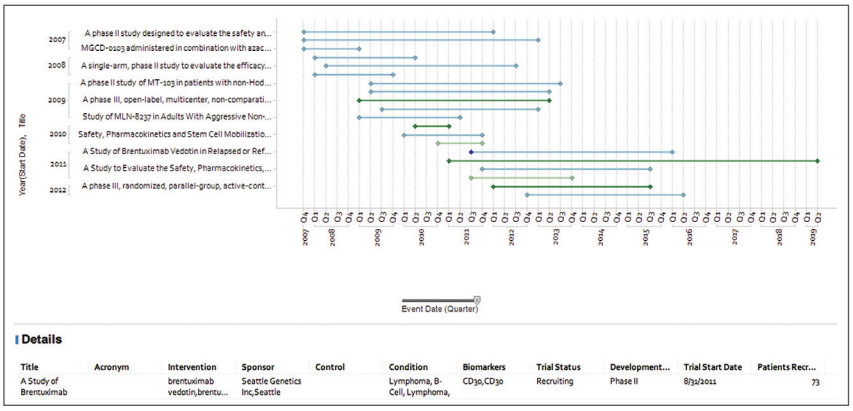
There are 2 questions here: firstly, the race of competing drugs towards registration, and secondly estimating trial durations. Both need to work on the same data points. Those data points are the start and (estimated or real) end dates of trials broken down by phase, indication, enrollment, etc.

For the first question we constructed a GANTT-like plot showing trials side-by-side. To handle the cases where the trial has yet to complete we computed a projected trial end date, constructed from the historical data on similar trials in the Cortellis database.

For the second question we used a standard "box-and-whiskers" plot of the data from completed trials. This visualization highlights the spread of data in the sample so you can get a sense of the variation. In addition to the Cortellis content on published trial start and end dates, for this analysis we have added an additional measure derived from anonymous, detailed trial information from our CMR benchmarking database.

RESULTS

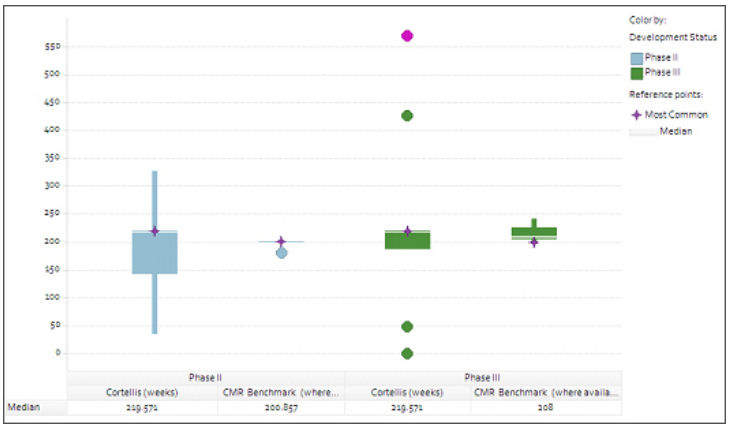
In this example we are looking at trials in Non-Hodgkin's lymphoma. We have filtered the focus to Phase II and Phase III trials, where the drug owner is sponsoring the trial and adjusted the date filter to see trials currently in progress or recently completed.



Each bar on the chart represents a trial from start to finish date. Here we are showing actual and projected end dates for the trials. Selecting a drug brings up further detail on the trial, e.g. the status of the trial and biomarkers employed in the study. It's easy to see which trials are likely to end in the coming year or whenever your own trial is due to complete.

In the following analysis we see the trial durations, in the same indication, for the same phases and by the drug owner.

FIGURE 1 - TRIAL TIMELINES IN NON-HODGKINS LYMPHOMA



The analysis shows a reasonably close correlation of trials in the same indication and phase and a good agreement between the Cortellis information, built from reports in public documents, and the CMR benchmarks, built from granular information deposited by Pharma companies themselves. There are some interesting outliers in Phase III trials which can be further investigated by clicking the link into the trial record on Cortellis.

FIGURE 2 - TRIAL DURATIONS IN NON-HODGKIN'S LYMPHOMA

AUTHOR BIO

Tim Miller has worked within the Thomson Reuters organization for 30 years, and specializes in the interface between Science and IT. In his current role Tim focuses on bioinformatics, cheminformatics, semantic technologies, and text/data mining &visualisation, specifically as they apply to the Pharma space. Tim holds a bachelor's degree in Chemistry from the University of York and a bachelor's degree in Law from the University of London. He is a Chartered Chemist (Member of the Royal Society of Chemistry) and a Chartered Information Technology Professional (Member of the British Computer Society)