

Bayesian modelling and prediction of patient recruitment

Challenge



Required support for recruitment of patients for clinical trials

- In many clinical trials, the amount of time needed to recruit the targeted number of patients is underestimated
- Failure to recruit enough patients in the planned time frame causes delays, additional costs, etc
- Consequently, estimating the recruitment duration is of crucial importance for the proper conduct of the trial

Solution



Developed a model to predict key metrics to ensure optimum level reached

- Developed a predictive model to predict the time to trial completion based on the recruitment data of an ongoing phase III clinical trial
- Used the Bayesian approach to account for the uncertainty in estimating the actual recruitment rate
- Computed the probability of completion at any given date in the future

Outcome



PharmaLex tool enabled tracking of recruitment process to ensure deadlines were met

- Fast-decision making tool to track the recruitment and to trigger the addition of other centers to meet clinical development deadlines