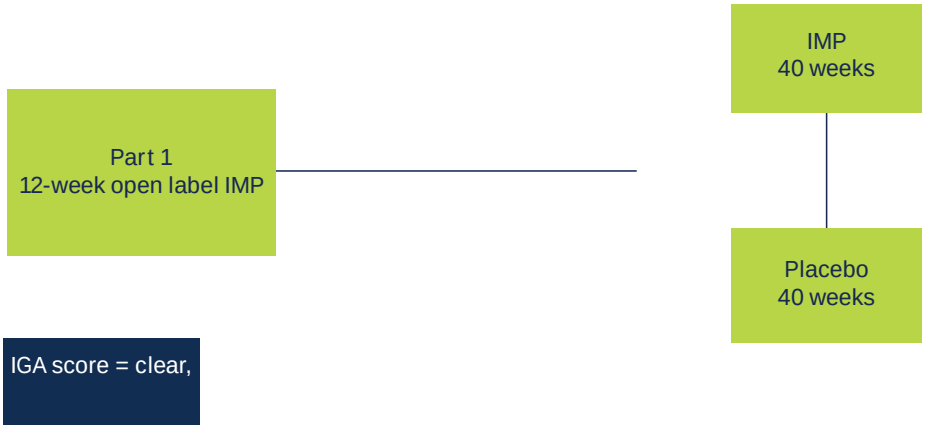
Meeting Randomization and Supply Challenges in an Innovative

Subject Flow in the Study

In Part One, enrolled subjects underwent an open-label 12-week treatment program with the IMP to see if it would improve their skin condition. When any subject received an IGA score of "clear" within this open label period, they were immediately entered into the double-blind randomized Part Two of the study. At the end of Part One, subjects were again evaluated and those with an IGA score of "near clear" or with a minimum 2 grade improvement were also randomized into Part Two.

Part Two was to determine whether a maintenance regimen using the IMP would be effective over an additional period of 40 weeks. However, the proper execution of Part Two introduced some challenges in both randomization and supply as discussed in the following section.



Challenges with the Study

RANDOMIZATION

Subjects continuing into Part Two of the study were randomized into either placebo control or active IMP. With conventional randomization techniques, the sponsor would be dependent on the completion of software speci□cations and programs that would run the interactive voice response (IVR) or interactive web response (IWR) system. Additionally, if errors were found in the IVR/IWR programs, a delay in randomization might occur. With only a short start-up period available, a tool facilitating a quick start-up time was preferred. The sponsor also wanted to use a dynamic randomization method and wanted to simulate randomization to ensure acceptable balance prior to study start.

SUPPLY

The sponsor needed to manage supplies for both the open label Part One and double-blind Part Two of the study, ensuring adequate stocks at sites without requiring excessive overage or wastage. The ability to adjust supply plans on an individual site basis would also help combat overstock and wastage at low recruiting sites and allow for the increased IMP requirements at higher recruiting sites. Again, the speed of implementation of supplies management was crucial, and the delays inherent with the setup and validation of traditional IVR/IWR systems were very unattractive.

Unique Simulation Capability

Rave RTSM's built-in simulation capability emulates the assignment of subjects in the trial into arms, strata, sites and factors in order to provide a view of how the randomization will be balanced within the selected design. As a result, researchers can

Selecting a Randomization Method

The study team discussed at length which method of randomization to use: dynamic allocation or the traditional permuted block randomization. The advantages of dynamic allocation in maintaining a continuous state of balance between the two arms throughout the randomization process could mean higher statistical reliability. The con□gurable second-best probability was also seen as a bene□t.

After reviewing their goals and requirements for the study, the team decided that the dynamic allocation method of randomization would best meet their needs.

System Environment for the Study

Lastly, the team reviewed the environment for the operation of Rave RTSM (Figure 4). They noted that the environment brought

Getting Started with Medidata Rave RTSM

Following their selection of Rave RTSM, the next step for the sponsor was to quickly turn their attention to the training needs of their staff to ensure the effective use of the new system.

Balance training was easily and quickly delivered via eLearning modules and allowed the sponsor to specify mandatory training completion prior to gaining access to the study. Individual user training was tracked by user login and could be retaken as needed at any time throughout the study duration.

Conclusion

Following an evaluation of the leading industry solutions, Rave RTSM was deemed the best choice for this midmarket sponsor to get off to a rapid start. At the design stage, the study team found that the entry of trial parameters, such as arms and factors, quickly established the study design. The randomization simulation allowed their biostatistician team to test the required power for the study and identify potential imbalances across study arms.