Public Stakeholder Meeting on Prescription Drug User Fee Act (PDUFA) Reauthorization

October 30, 2020

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Outline for this meeting

• Welcome and Roll Call
• Presentation Topics:
  • Patient Focused Drug Development
  • Model-Informed Drug Development
  • Complex Innovative Designs for Clinical Trials
  • Other Areas of Regulatory Science: Advancing Translational Models & Tools
• Topics for upcoming meetings
Complex Innovative Designs (CID) for clinical trials

October 30, 2020
Complex Innovative Designs (CID): Background

- Complex Innovative Designs (CID) refers to complex adaptive, Bayesian and other novel clinical trial designs

- CID has the potential to increase trial efficiencies:
  - Decrease number of patients, Accelerate product development, Optimize product development

- Prior to PDUFA VI, limited use of CID intended to provide substantial evidence of effectiveness
  - Lack of uniformity of acceptance and guidance
  - Lack of experience and understanding across industry and FDA
  - Computational complexity
  - Inability to publicly discuss any CID proposals under INDs
CID: PDUFA VI Reauthorization Performance Goals

• Develop staff capacity to enable processes to facilitate appropriate use of CID
• Conduct a pilot program for highly innovative trial designs for which analytically derived properties may not be feasible, and simulations are necessary to determine trial operating characteristics.
  • Pilot includes a pair of meetings, 120 days apart
  • FDA selects up to 2 proposals quarterly each year
  • To promote innovation, trial designs may be presented by FDA as case studies, including while the drug studied in the trial has not yet been approved by FDA
• Convene a public workshop
• Publish draft guidance on complex adaptive designs
CID : Progress-to-Date

• Developed staff capacity
  • Launched internal training series

• Launched CID Pilot Meeting Program
  • Published FRN outlining eligibility criteria, content of meeting packages, and disclosure categories – (August 2018)
  • Developed a CID website
  • Shared learning through staff participation at over 10 conferences/workshops
CID: Progress-to-Date Pilot Meeting Program

• Accepted 5 of 12 submissions
• Submissions spanned several therapeutic areas
  • Neurology
  • Analgesia
  • Rheumatology
  • Oncology
• Designs Featured
  • Use of Bayesian methodology
  • Formulation of a master protocol
  • Incorporation of external data
• Reasons for denials
  • Lack of therapeutic-area consensus on endpoint
  • Additional interactions would add little value to extensive advice already received
  • Low level of innovation
Conducted CID Public Workshops

- Promoting the Use of Complex Innovative Designs in Clinical Trials – (March 2018)
- Advancing Complex Innovative Clinical Trial Designs to Efficiently Deliver Medicines to Patients (March 2020, in collaboration with DIA)

Published guidance documents

- Adaptive Designs for Clinical Trials – (finalized November 2019)
- Interacting with the FDA on Complex Innovative Trial Designs – (draft September 2019)
CID: Summary

• Goal of CID is to bring safe and effective products to patients

• CID has the potential to increase trial efficiencies:
  • Decrease number of patients
  • Accelerate product development
  • Optimize product development

• CID has broad utility but may be particular useful in challenging therapeutic areas

• CID efforts aimed at advancing innovation through collaboration, education, and clarity