spaulding clinical℠
RESEARCH BEYOND RESULTS

CEM vs TQT
QT Assessment Options

Today's Speakers

Jay W. Mason, MD, Chief Medical Officer — Widely recognized as one of the preeminent cardiologists' on cardiac safety, Dr. Mason has 35+ years of experience in cardiac care and research. He has authored hundreds of articles on cardiac repolarization and the overall diagnosis of torsades de pointes. Dr. Mason has advised 125 pharmaceutical/biotech companies during the past 10 years.

Daniel S. Selness, Chief Strategy Officer — Research executive with over 24 years of experience in operational management of clinical research, with 20 years focused on Phase I trials, from both the Phase I unit and the Pharmaceutical Sponsor standpoint.

- TQT Timepoint based analysis
  - Sampling of ECG and plasma concentration at pre-specified timepoints
    - Pre and Post drug administration
  - QT Effect reviewed at cMax or tMax timepoint
- Concentration Effect Modeling
  - QT change at given plasma concentration
  - Can leverage SAD/MAD study for model
  - Can “pool” data for analysis

CEM Not Appropriate, but TQTS Appropriate

- Known pharmacokinetic – pharmacodynamic (PK-PD) hysteresis
- Drugs with Very long half-life
- Herbal and multiple-moiety drugs

Favored Method

Factor	Favored Method	Weight of Factor*
Price and time very critical to sponsor	CEM	H
Clinical dose cannot be reliably predicted	CEM	M
Tmax highly variable	CEM	M
Known PK-PD hysteresis	TQTS	H
Very long half-life	TQTS	H
Herbal, multiple moieties	TQTS	H
Multiple days of dosing required	TQTS	L
Only relatively low exposure achievable	TQTS	M
Crossover cannot be done	TQTS	L
*Weight H- high; M – medium; L – Low		

Spaulding Clinical Research Overview

- Established in 2007 with a team of experts from pharmaceutical, CRO, clinical practice, and the medical device industries with over 150 years of combined experience
- Full Service Core ECG Laboratory: Phase I to IV
- Clinical Pharmacology
  Research Unit, West Bend, WI
- Full Service Biometrics
- Medical Device Manufacturer