Topical Corticosteroid Bioequivalence
An Evaluation of the FDA Guidance

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Analysis of FDA Example AUEC Data

NONMEM Emax No E0, FOCE

Visual Predictive Check

Steroid Blanching Model

Steroid Blanching Equations

Steroid Blanching Parameters

Simulation Evaluation of AUEC

AUEC Time Course

Extent of Absorption

Rate of Absorption

Conclusions

AUEC maximum ("Emax") is most sensitive to differences in
- Extent of absorption
- Rate of absorption

"ED_{50}" is poorly estimated and the point estimate is dependent on the estimation procedure
- A simulation investigation using plausible pharmacological models for steroid blanching provides no support for the "ED_{50}" design point for the pivotal study bioequivalence analysis
- The FDA Topical Steroid guidance should be revised