PHARMACOMETRIC MODEL-BASED META-ANALYSIS

• 29 COPD trials. Criteria: ≥500 patients and ≥43,472 patients.
• The meta-analytic model predicted as non-linear functions:
• Exacerbation rate ratio between the active and placebo arms

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MARKOV MICROSIMULATION MODEL

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• Predicting health economic outcomes given a target product profile.
• Understanding implications of trial design and trial population decisions.

CONCEPTUAL FRAMEWORK

• The study objective was to utilize PMBMA results within a health economic microsimulation model (HEMM) of COPD to better predict HE outcomes based on trial design.

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DISCUSSION

• The syngaptic aspects of PBMMA and HEMM are highlighted in this hypotheical example.
• We illustrate how exacerbation and QALY outcomes can vary significantly based on trial design assumptions.
• PBMMA use allowed placebo exacerbation rate predictions for patient subgroups.
• Markov microsimulation modeling allows the fine predictions of PBMMA to inform parameters while individual simulations allow advantages of model memory.

RESULTS

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