

Structural model

The logarithmic transformed concentration data were best described by a one-compartment model with an additive residual error. Inter-individual variability (IIV) was included on CL.

$$CL_{i,j} = CL_{pop} * \exp(\eta_i)$$

Covariate analysis

Continuous covariates were tested using the following equation:

$$Eq. 1: \quad CL_i = [CL_{pop} * (COV/median COV)^{\theta_{cov}}] * \exp(\eta_i)$$

Categorical covariates were implemented as shown in equation 2:

$$Eq. 2: \quad CL_i = CL_{pop} * (\theta_{cat1})^{FLAG1} * (\theta_{cat2})^{FLAG2} * \exp(\eta_i)$$

The $\theta_{cat1,2...}$ is the typical value under different categorical conditions The FLAG (1,2...) are first set to 0, when certain categorical covariate appears, the FLAG is set to 1.