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Determining Individual-Specific Terminal Half-Life Estimates and Optimal Sampling Time Points for Patients with Hemophilia B Administered rFIXc

Individual-specific estimates have not been determined for patients with hemophilia B who are receiving prophylactic treatment for Alprolix. We aim to (i) determine individual-specific terminal half-life estimates and (ii) identify informative sampling points to reduce the required number of blood samples, without loss of accuracy in pharmacokinetic estimates. Using nonlinear mixed-effects regression, we identified a three-compartment model to describe plasma concentrations after an IV bolus injection, while simultaneously estimating interindividual variability, intraindividual variability, and covariate effects. A limited sampling strategy will be used to determine optimal sampling time points to reduce the number of required concentration measures and improve overall prophylactic management.