

Supporting Information

A Computational Model of Cytokine Release Syndrome during CAR T-cell Therapy

Zhuoyu Zhang, Lunan Liu, Chao Ma, Weiqiang Chen*

Corresponding author: Prof. Weiqiang Chen
E-mail: wchen@nyu.edu

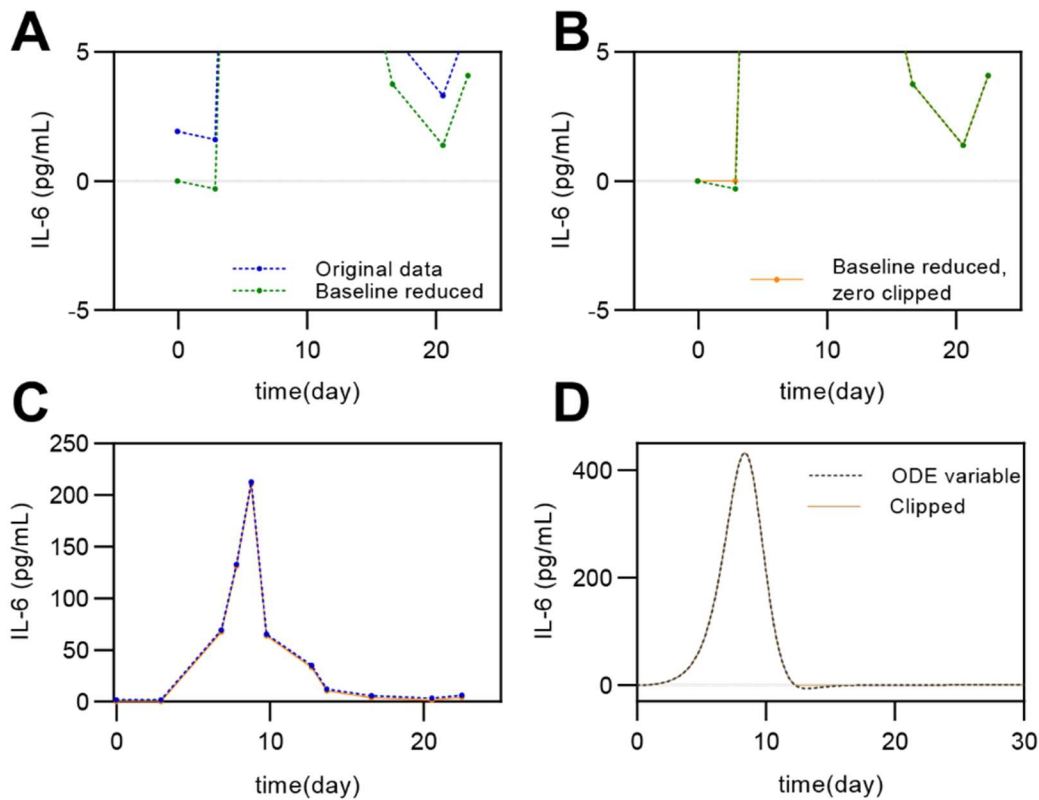


Figure S1. Example of trimming of cytokine concentrations. (A-C) Demonstration of how original cytokine concentration data was processed using serum IL-6 data for Patient #1. (A) The original data was subtracted with the baseline. (B) The baseline reduced data may have some negative artifacts, these were clipped to zero. (C) Comparison of trimmed concentration and the original clinical data. (D) The ODE variable for serum IL-6 for Patient #13. The cytokine concentration variable in the ODE may also go below zero, these concentrations were also clipped to zero before feeding to further calculation.

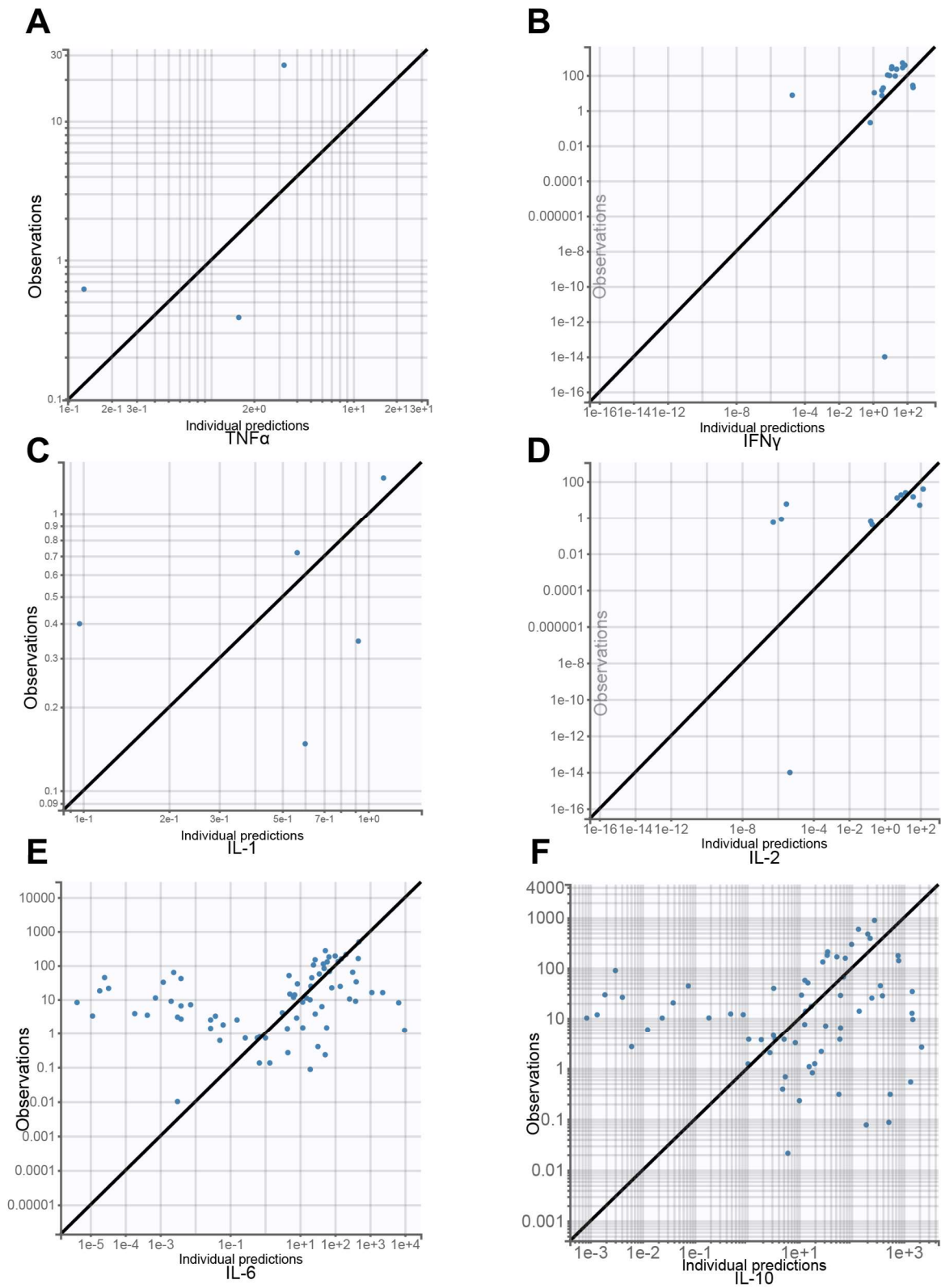


Figure S2. The prediction vs. Observation plots from Monolix software for a visual inspection of the fitting of (A) TNF- α (B) IFN- γ (C) IL-1 (D) IL-2 (E) IL-6 (F) IL-10.

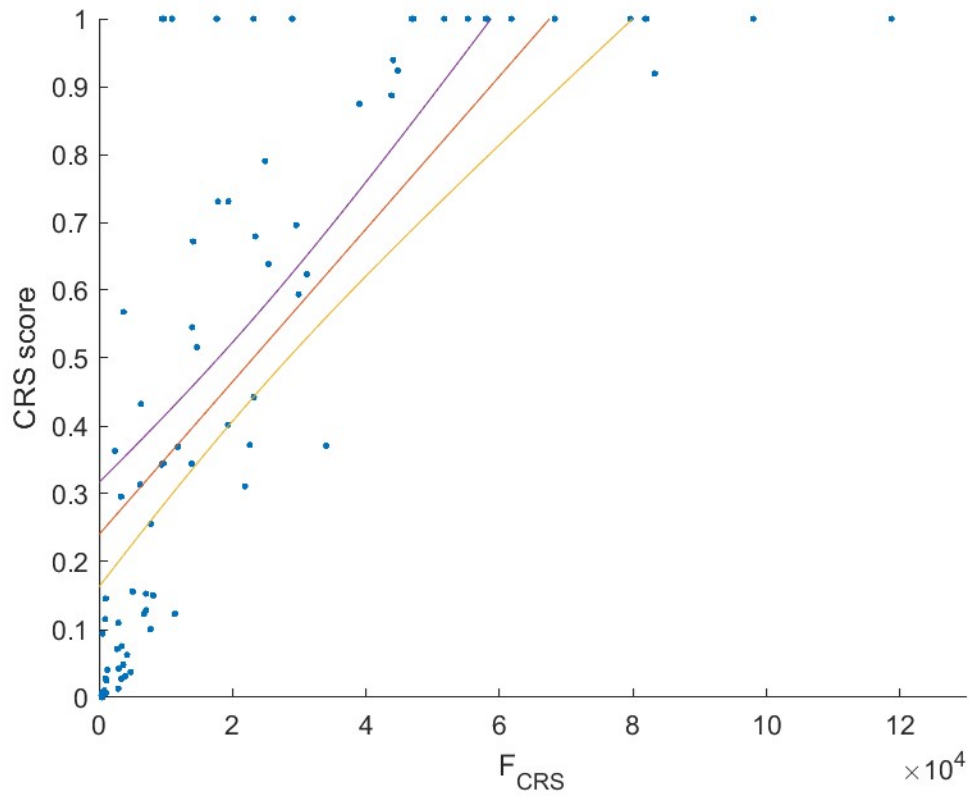


Figure S3. CRS Factor using IL-6 only showed inferior fitting.