



**SUPPLEMENTARY FIG. S3.** Model diagnostics. Four figures represent the predictive model diagnostics. Left top graph shows that the residuals in the model perform well in the middle ranges and at extremes are less reliable. The Normal Q-Q plot is testing normality of the model and should have a straight diagonal curve, which is displayed in the top right figure. Cooks distance (*left bottom*) demonstrates the individual outliers where the model predicted poorly; however, only three patients have been identified in the group. Furthermore, the residuals versus leverage plot (*right bottom*) will identify whether the outliers are causing significant influence on the model, which would result in a line that is not straight.