

Fig. S1. Machine-learning variable importance plots (Random Forest, XGBoost). Variable importance from supplementary exploratory machine-learning analyses (Random Forest and XGBoost) at the observation level (n = 220 complete observations; 37 events with NRS > 3). Twelve candidate predictors were evaluated. Random Forest variable importance is shown as mean decrease in Gini impurity (left panel) and mean decrease in accuracy (centre panel); XGBoost variable importance is shown as information gain (right panel). Out-of-bag error for Random Forest was 16.4%; 5-fold cross-validation error for XGBoost was 15.9%. Age and haemoglobin were ranked highest by both algorithms, followed by BMI, urea, and PTH; PTH was not the strongest predictor in either model. Given the modest sample and event count, these analyses are hypothesis-generating only.



