b. Precision-Recall curves a. ROC curves for different PMA 10 0.8 8 sensitivity 0.6 PPV LB 6 0.4 4 0.2 0.6 2 0 0.6 0.2 0.6 0.2 0 0.6 0.8 0.4 sensitivity 1-specificity LR-28 weeks (AUC 69.1%) —— 30 weeks (AUC 73.3%) -32 weeks (AUC 75.7%) 28 weeks (AUC 65.9%) - - - 30 weeks (AUC 84.1%) - - - 32 weeks (AUC 87.6%) f. Variation of AUC over age d. Loglikelihood vs Recall e. PPV vs. NPV 10 0.9 8 0.8 0.8 LR 6 4 0.6 0.6 2 **UChicago** 0.4 0.6 0.8 28 0.6 26 32 0.8 sensitivity PMA [week] **NPV Q.** Top predictive contributors (increased risk) h. Top predictive contributors (decreased risk) 0.2 SHAP value 0.00 -0.25-0.2Alphaproteo. 28 Bacteroidia 26 Actino. 26 Alphaproteo. 30 Clostridia 28 Actino. 28 Negativicutes 28 Alphaproteo. 29 Negativicutes 29 Coriobacteriia 30 Fusobacteriia 32 Vicinami. 32 Negativicutes 26 Coriobacteriia 28 Actino. 29 Bacteroidia 27 Actino. 27 Alphaproteo, 31 Gammaproteo. 27 Coriobacteriia 27

C. Loglikelihood ratio trade-off