Feature Weights Feature z-score Metagenomic Features lasso model (|W| = 50)HIGH (n=456) LOW (n=963) -3 -1 1 3 effect size robustness 80% 100% s__Proteus_penneri 0.1 s Fusobacterium necrophorum s_candidate_division_TM7_single_cell_isolate_TM7c 90% s_Bifidobacterium_pseudolongum 100% s Eubacterium infirmum 100% s_Lactobacillus_fermentum i mm trrurr 100% s__Citrobacter_koseri 90% s__Alistipes_sp_JC136 100% s Fusobacterium ulcerans 100% s_Lachnospiraceae_bacterium_6_1_63FAA 100% s__Serratia_marcescens 0.8 100% s Acidaminococcus intestin 80% s_Lactococcus_garvieae 100% s_Parabacteroides_sp_20_3 100% s Fuhacterium dolichum 70% s_Weissella_confusa 80% s_Bacteroides_fluxus s_Streptococcus_cristatus s Abiotrophia defectiva 100% 90% s_Anaerostipes_sp_3_2_56FAA 9.0 100% s_Porphyromonas_asaccharolytica s Lactobacillus crispatus 100% s_Pseudomonas_aeruginosa LOW 100% 80% 100% s Parvimonas micra s Peptostreptococcus stomatis 100% 100% 80% 100% s_Eubacterium_sp_3_1_31 s_Ureaplasma_parvum s_Streptococcus_mutans 0.4 s_Porphyromonas_somerae 90% s_Staphylococcus_lugdunensis 100% s Propionibacterium freudenreichii 100% s_Coprobacter_fastidiosus 100% s__Lactobacillus_delbrueckii 100% s_Dialister_succinatiphilus s_Bifidobacterium_breve 90% s_Shigella_sonnei 90% 80% 0.2 s Lactobacillus iners 100% s_Leuconostoc_mesenteroides 100% 80% 80% s__Lactobacillus_sakei s Leuconostoc lactis s_Neisseria_subflava 100% s_Streptococcus_peroris 100% 100% s_Pediococcus_pentosaceus s_Coprobacillus_sp_D6 100% s Leuconostoc pseudomesenteroides 100% s_Marvinbryantia_formatexigens 0.0 s Lactobacillus plantarum s_Lactococcus_raffinolactis Classification result -0.03 0.00 0.02 proportion of median relative feat. weight weight shown artiblotics current i DNA extraction kit disease subtype mate decarboxylase 2 antibody