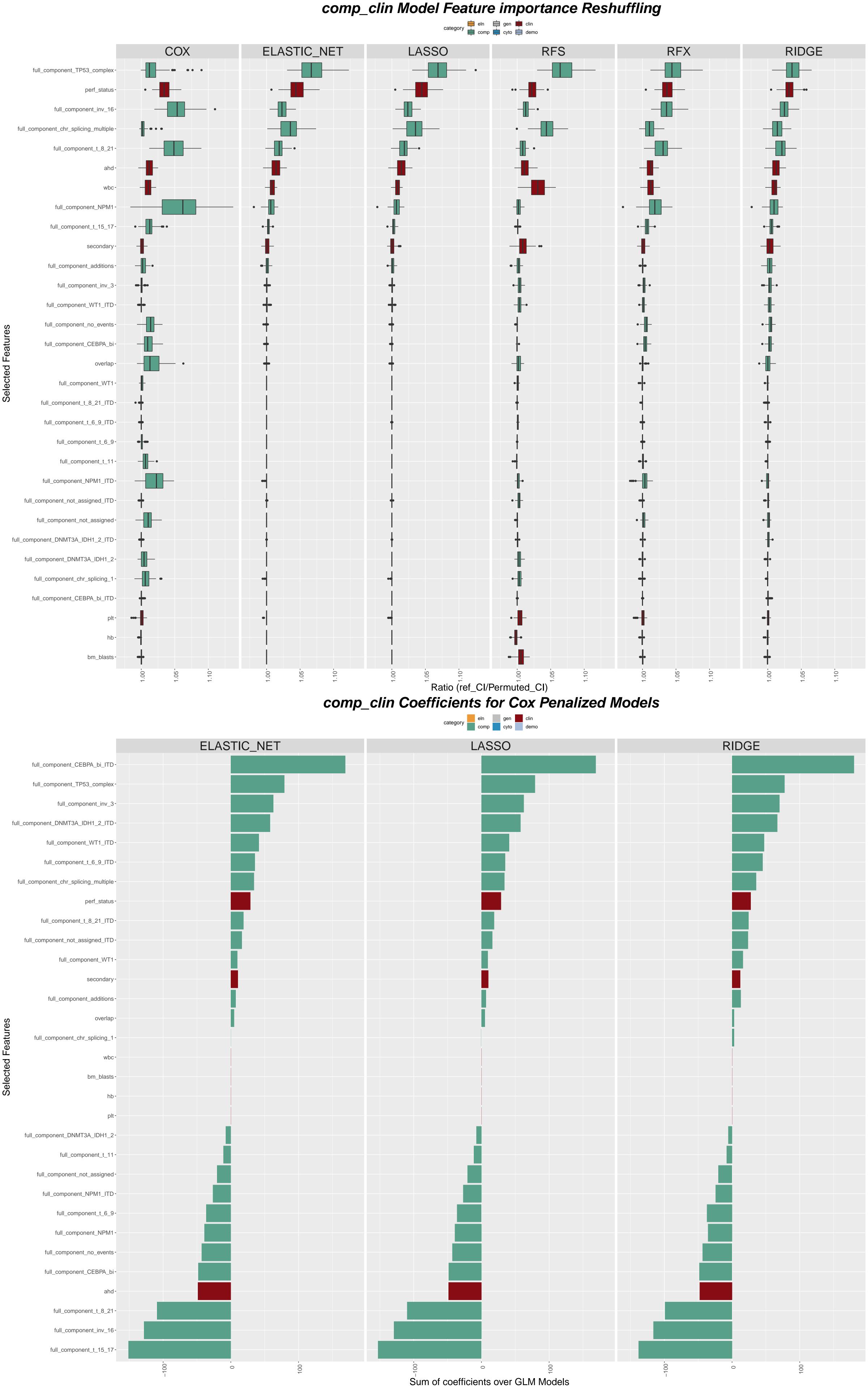
clin_demo Model Feature importance Reshuffling COX ELASTIC_NET RFS RIDGE RFX LASSO perf_status ahdwbcgenderbm_blasts -Ratio (ref_Cl/Permuted_Cl)

Clin_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE perf_status secondary gender-Selected Features bm_blasts-Sum of coefficients over GLM Models

clin Model Feature importance Reshuffling ELASTIC_NET COX RFS RIDGE LASSO RFX perf_status ahdsecondaryhbbm_blasts-Ratio (ref_CI/Permuted_CI) clin Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE perf_status secondary wbc-Selected Features bm_blasts -Sum of coefficients over GLM Models -20

comp_clin_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RIDGE RFX full_component_TP53_complexperf_status full_component_inv_16full_component_NPM1 full_component_t_8_21 full_component_chr_splicing_multiple full_component_inv_3full_component_t_15_17full_component_no_events full_component_WT1_ITDfull_component_additions overlapfull_component_WT1full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11 full_component_NPM1_ITDfull_component_not_assigned_ITDfull_component_not_assignedfull_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_CEBPA_bi_ITDfull_component_CEBPA_bisecondary genderbm_blasts -Ratio (ref_CI/Permuted_CI) comp_clin_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_inv_3full_component_t_6_9_ITDfull_component_TP53_complexfull_component_WT1_ITD full_component_DNMT3A_IDH1_2_ITDfull_component_not_assigned_ITDfull_component_WT1 full_component_t_8_21_ITDperf_status full_component_chr_splicing_multiplefull_component_additions full_component_t_11 secondary -Selected Features overlap genderagefull_component_t_6_9wbcbm_blasts hbplt full_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_not_assignedfull_component_NPM1_ITDfull_component_CEBPA_biahdfull_component_NPM1 full_component_no_eventsfull_component_t_8_21 full_component_inv_16full_component_t_15_17--20



comp_cyto Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX RIDGE full_component_chr_splicing_multiplefull_component_t_8_21 full_component_inv_16full_component_TP53_complexfull_component_NPM1del_5 full_component_t_15_17 del_7del_17full_component_additions full_component_no_eventsfull_component_WT1_ITD add_11 full_component_CEBPA_biothers_translocminusydel_9 del_3del_20 del_18del_16del_12complex add_8add_22 add_21 add_13overlap full_component_WT1 full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11 full_component_NPM1_ITDfull_component_not_assigned_ITDfull_component_not_assignedfull_component_inv_3full_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_CEBPA_bi_ITD-Ratio (ref_Cl/Permuted_Cl) comp_cyto Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_WT1_ITDfull_component_inv_3full_component_TP53_complexfull_component_DNMT3A_IDH1_2_ITDfull_component_chr_splicing_multipledel_5 full_component_t_6_9_ITDdel_17full_component_not_assigned_ITDadd_11 full_component_additions del_7 full_component_t_8_21_ITDdel_16others_translocdel_20 minusy -Selected Features full_component_WT1del_12overlapfull_component_chr_splicing_1 complex full_component_t_11 del_3add_21 add_13full_component_NPM1_ITDadd_8full_component_DNMT3A_IDH1_2full_component_not_assignedfull_component_NPM1 add_22full_component_t_6_9full_component_no_eventsfull_component_CEBPA_bifull_component_inv_16full_component_t_8_21 full_component_t_15_17-100

comp_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO **RFS** RIDGE RFX agefull_component_TP53_complexfull_component_inv_16full_component_t_8_21 full_component_NPM1 full_component_chr_splicing_multiplefull_component_no_eventsfull_component_t_15_17full_component_WT1_ITD full_component_inv_3full_component_additions full_component_DNMT3A_IDH1_2overlapfull_component_WT1full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11 full_component_NPM1_ITDfull_component_not_assigned_ITDfull_component_not_assignedfull_component_DNMT3A_IDH1_2_ITDfull_component_chr_splicing_1 full_component_CEBPA_bi_ITDfull_component_CEBPA_bigender-Ratio (ref_CI/Permuted_CI) comp_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_inv_3full_component_WT1_ITD full_component_t_6_9_ITDfull_component_TP53_complexfull_component_not_assigned_ITDfull_component_DNMT3A_IDH1_2_ITDfull_component_WT1full_component_t_8_21_ITDfull_component_chr_splicing_multiplefull_component_additions -Selected Features full_component_t_11genderoverlap agefull_component_t_6_9full_component_chr_splicing_1 full_component_DNMT3A_IDH1_2full_component_NPM1_ITDfull_component_not_assignedfull_component_CEBPA_bifull_component_NPM1 full_component_no_events full_component_t_8_21full_component_inv_16full_component_t_15_17-0 Sum of coefficients over GLM Models

150 --100

Sum of coefficients over GLM Models

20

full_component_inv_16-full_component_t_15_17-

comp_gen_cyto Model Feature importance Reshuffling eln eln cin cyto demo COX ELASTIC_NET **RFS** LASSO RIDGE RFX full_component_chr_splicing_multiple-------TP53---full_component_inv_16 full_component_t_8_21 -•—— TET2full_component_NPM1 -+ -----• ---full_component_TP53_complex-•• del_5-----SRSF2-••• + full_component_t_15_17 -•--• full_component_additions-•— -ASXL1----••-DNMT3Acomplex add_11 -•-full_component_WT1_ITD-•----SF3B1del_17-•-||--||-•-||-•••• ITD--• full_component_inv_3-••--PTPN11full_component_CEBPA_bi-•|•• del_20 -WT1 -• U2AF1_p.S34-STAG2-SMC3-SMC1A-RUNX1-RAD21-PHF6-NRAS_p.Q61_62-Selected Features NRAS_p.G12_13-NF1-MYC-• MLL-KRAS-KIT-IDH2_p.R172-IDH2_p.R140-IDH1-GATA2-FLT3_TKD-FLT3_other-CEBPA_mono-CBL-BCORothers_translocminusy del_9 del_3del_18del_16del_12add_8add_22add_21 add_13overlapfull_component_WT1 -+ full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9----full_component_t_11 full_component_NPM1_ITDfull_component_not_assigned_ITD full_component_not_assignedfull_component_no_eventsfull_component_DNMT3A_IDH1_2_ITD-••full_component_DNMT3A_IDH1_2-1.00full_component_chr_splicing_1full_component_CEBPA_bi_ITD-Ratio (ref_CI/Permuted_CI) comp_gen_cyto Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_inv_3full_component_DNMT3A_IDH1_2_ITDfull_component_WT1_ITDfull_component_t_6_9_ITDfull_component_not_assigned_ITDdel_5full_component_chr_splicing_multiple-NRAS_p.Q61_62-SF3B1-ASXL1-TET2-EZH2full_component_TP53_complex -U2AF1_p.S34del_17full_component_additions -KRASadd_11 -SRSF2others_translocfull_component_t_8_21_ITD-WT1 -MLLdel_7complex del_16del_20 del_9 -DNMT3Adel_12-SMC1A-Selected Features add_13-ITD-CBLminusy full_component_WT1-NRAS_p.G12_13-FLT3_other-IDH2_p.R140-RUNX1full_component_t_11-BCORadd_21 -SMC3-NF1full_component_chr_splicing_1 -STAG2-PHF6-FLT3_TKD-CEBPA_monoadd_8-KITfull_component_DNMT3A_IDH1_2-IDH1full_component_NPM1_ITDdel_3-PTPN11full_component_not_assigned-GATA2-RAD21-MYCfull_component_NPM1 del_18full_component_t_6_9full_component_no_events -IDH2_p.R172add_22 full_component_CEBPA_bi-

Sum of coefficients over GLM Models

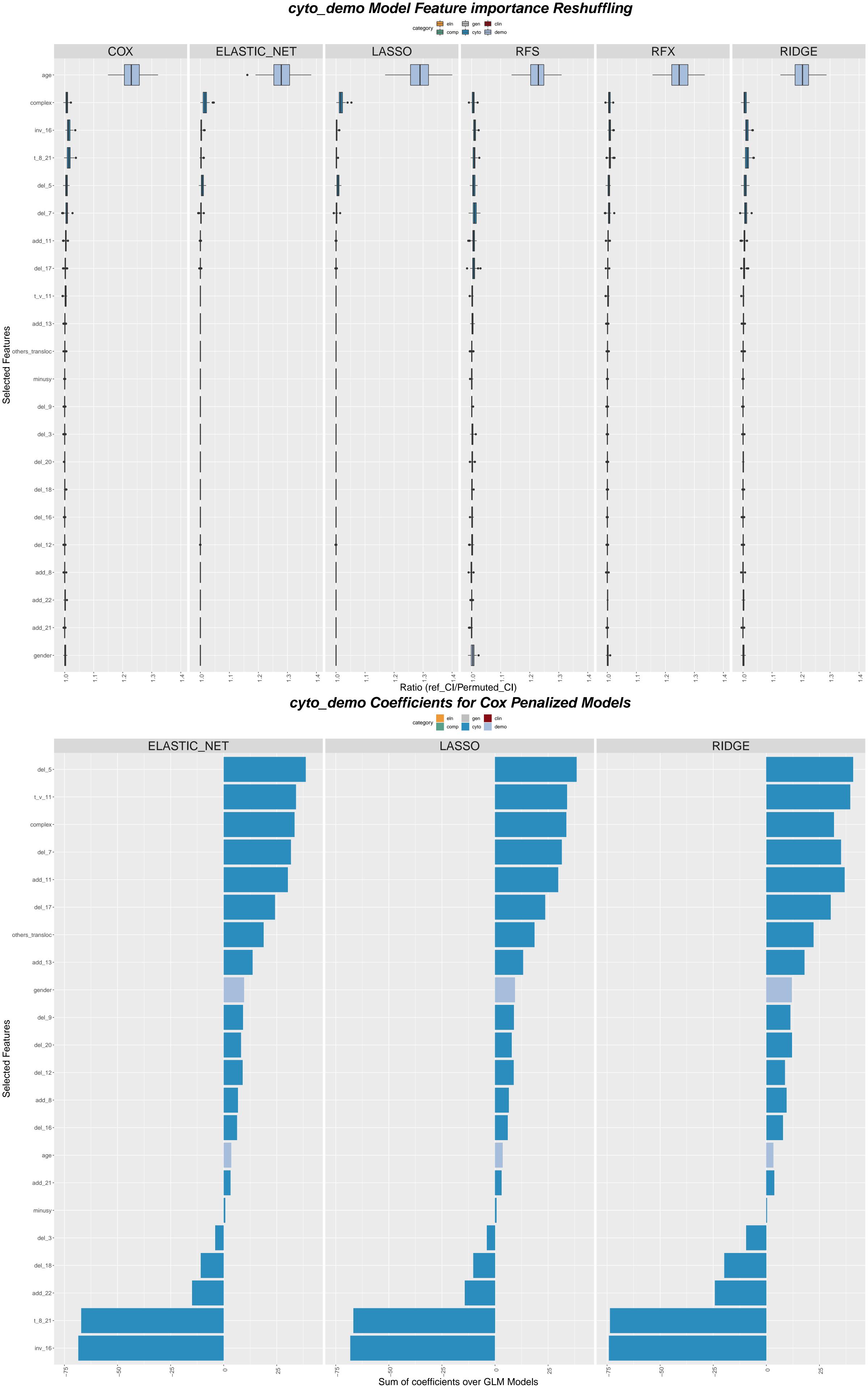
full_component_inv_16full_component_t_8_21full_component_t_15_17-

comp_gen Model Feature importance Reshuffling comp cyto demo COX ELASTIC_NET LASSO RFS RIDGE RFX TP53full_component_inv_16full_component_chr_splicing_multiple full_component_t_8_21 full_component_TP53_complexfull_component_NPM1-•—— TET2full_component_t_15_17 full_component_additions -----SRSF2-• ASXL1full_component_inv_3-DNMT3Afull_component_CEBPA_bifull_component_no_events -••• SF3B1full_component_WT1_ITD -••-PTPN11-•---NRAS_p.Q61_62-IDH2_p.R172-EZH2----ITD-WT1-U2AF1_p.S34-STAG2-SMC3-SMC1A-RUNX1-RAD21-PHF6-NRAS_p.G12_13-NF1-MYC-MLL-KRAS-KIT-IDH2_p.R140-IDH1-GATA2-FLT3_TKD-FLT3_other-CEBPA_mono -CBL-BCORoverlapfull_component_WT1 full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11 full_component_NPM1_ITDfull_component_not_assigned_ITDfull_component_not_assignedfull_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_CEBPA_bi_ITD-Ratio (ref_CI/Permuted_CI) comp_gen Coefficients for Cox Penalized Models LASSO ELASTIC_NET RIDGE full_component_CEBPA_bi_ITD-TP53full_component_inv_3full_component_DNMT3A_IDH1_2_ITDfull_component_WT1_ITDfull_component_t_6_9_ITDfull_component_TP53_complexfull_component_not_assigned_ITD-NRAS_p.Q61_62full_component_chr_splicing_multiple -EZH2-TET2-ASXL1-U2AF1_p.S34-SRSF2full_component_additions full_component_t_8_21_ITD -MLL-WT1 -DNMT3A-SMC1A-CBL-NRAS_p.G12_13-Selected Features ITD-RUNX1-FLT3_otherfull_component_WT1 -IDH2_p.R140-NF1-BCOR-SMC3full_component_t_11full_component_chr_splicing_1 full_component_DNMT3A_IDH1_2-KIT-CEBPA_monooverlap -PHF6-FLT3_TKD-STAG2-IDH1full_component_NPM1_ITD-PTPN11full_component_not_assigned-GATA2-RAD21-MYCfull_component_t_6_9full_component_NPM1 full_component_no_events IDH2_p.R172full_component_CEBPA_bifull_component_t_8_21 full_component_inv_16 full_component_t_15_17-

comp Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX RIDGE full_component_TP53_complexfull_component_chr_splicing_multiplefull_component_inv_16full_component_t_8_21 full_component_NPM1 full_component_t_15_17 full_component_no_events full_component_additions full_component_CEBPA_bifull_component_WT1_ITDfull_component_not_assignedfull_component_inv_3overlapfull_component_WT1 full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11full_component_NPM1_ITDfull_component_not_assigned_ITDfull_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_CEBPA_bi_ITD-Ratio (ref_CI/Permuted_CI) comp Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_TP53_complexfull_component_inv_3full_component_WT1_ITDfull_component_DNMT3A_IDH1_2_ITDfull_component_chr_splicing_multiplefull_component_t_6_9_ITDfull_component_not_assigned_ITDfull_component_additions full_component_t_8_21_ITDoverlap -Selected Features full_component_WT1 full_component_chr_splicing_1 full_component_t_11 full_component_NPM1_ITDfull_component_DNMT3A_IDH1_2full_component_not_assignedfull_component_NPM1 full_component_t_6_9full_component_no_eventsfull_component_CEBPA_bifull_component_t_8_21 full_component_inv_16 full_component_t_15_17-0 Sum of coefficients over GLM Models

cyto_clin_demo Model Feature importance Reshuffling ELASTIC_NET COX LASSO RFS RFX RIDGE perf_status complext_v_11 -Selected Features others_translocdel_20 del_16del_12add_8add_22 add_21 add_13secondarygenderbm_blasts-Ratio (ref_Cl/Permuted_Cl) cyto_clin_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE del_5 add_11 del_7 t_v_11 del_17 perf_status others_translocadd_13del_12genderdel_9 secondary-Selected Features add_8del_20 del_16add_21 agebm_blastsminusydel_18add_22 t_8_21 inv_16-Sum of coefficients over GLM Models

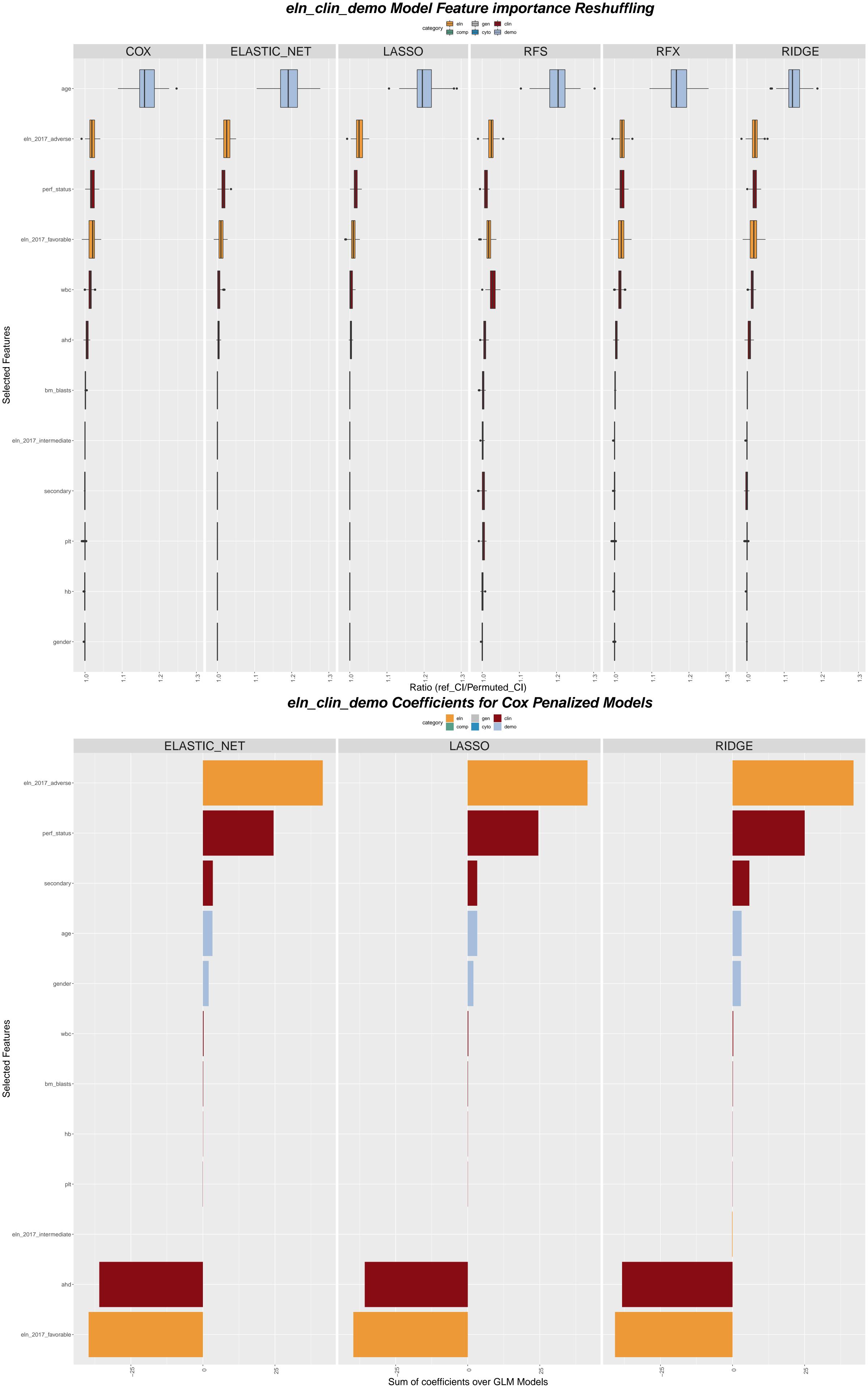
cyto_clin Model Feature importance Reshuffling COX ELASTIC_NET LASSO **RFS** RFX RIDGE perf_status inv_16t_8_21 -Selection add_13 Selection del_20 t_v_11 others_translocminusydel_9 del_3 add_8add_22 add_21 bm_blasts-1.08 Ratio (ref_Cl/Permuted_Cl) cyto_clin Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE del_17 del_5add_11 del_7 perf_status complexsecondary add_13del_20 add_8add_21 minusy-Section Section Sectin Section Section Section Section Section Section Section Section del_16del_9 wbcbm_blastshbdel_3 del_18add_22 t_8_21 inv_16-90 Sum of coefficients over GLM Models

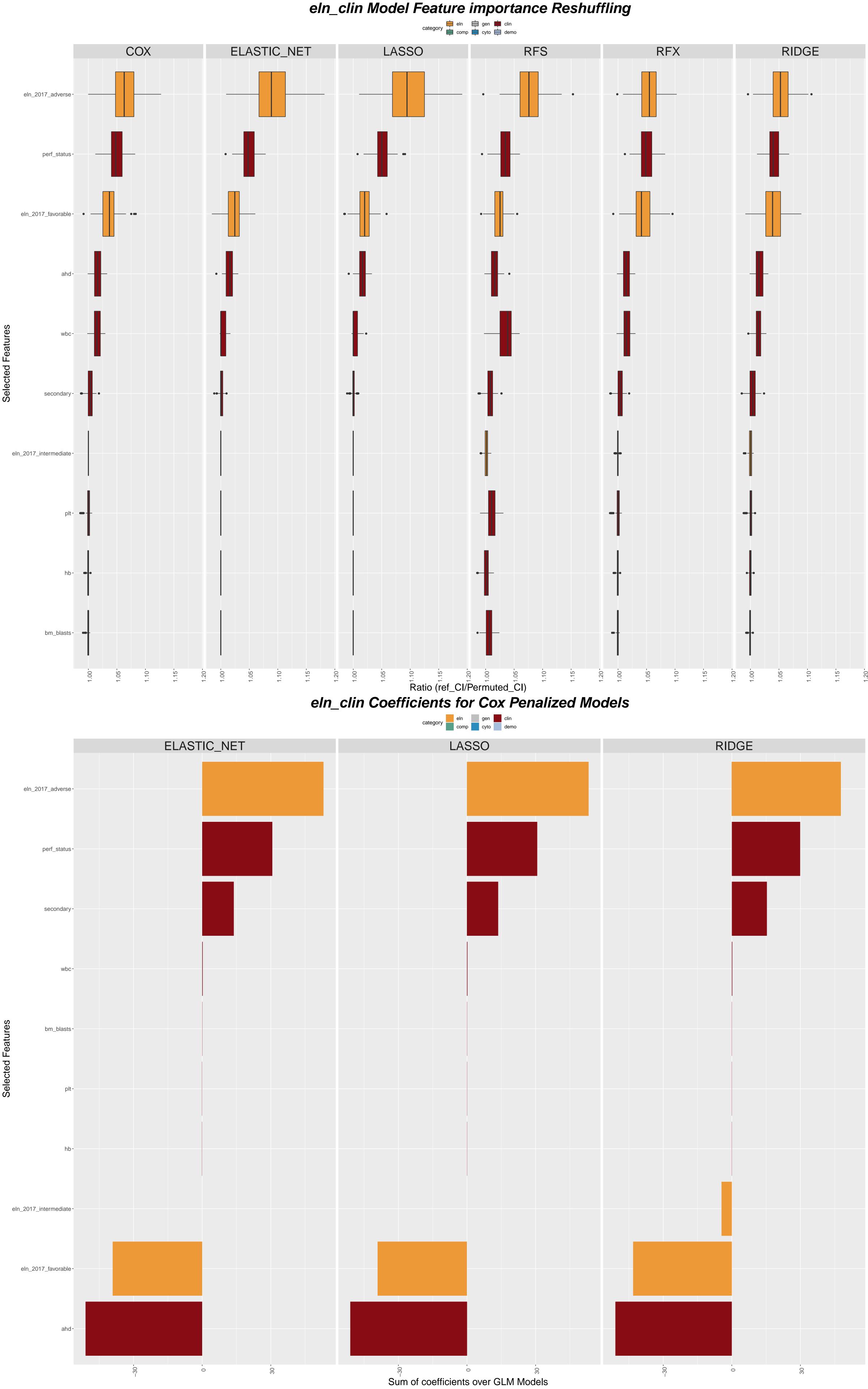


cyto_gen_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX RIDGE • •• age-TP53-ITD-ASXL1 complex del_7-WT1 DNMT3Adel_5 -IDH2_p.R172add_11 del_17 -CEBPA_bit_v_11 -U2AF1_p.S34-TET2-STAG2-SRSF2-SMC3-SMC1A-SF3B1-RAD21-PTPN11-PHF6-NRAS_p.Q61_62 NRAS_p.G12_13 NF1 MYC-KRAS-IDH2_p.R140-IDH1 -GATA2-FLT3_TKD-FLT3_other-EZH2-CEBPA_mono-CBL-BCORothers_translocminusy del_9 del_20 del_18del_16del_12 add_8 add_22 add_21 add_13gender-RUNX1-Ratio (ref_CI/Permuted_CI) cyto_gen_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-NRAS_p.Q61_62-WT1-ITD-ASXL1t_v_11 complex -KRASdel_5 add_11 others_transloc-EZH2-SF3B1add_13-NF1del_9 -NRAS_p.G12_13-U2AF1_p.S34del_17 -DNMT3Adel_12-SRSF2-BCOR-Selected Features TET2-SMC1A-CBL-FLT3_other-KITdel_16-PHF6del_20 gender-RUNX1add_21 ageadd_8-SMC3minusy -STAG2-IDH2_p.R140-IDH1 -FLT3_TKD-CEBPA_mono-PTPN11-RAD21-MYCdel_3-GATA2-CEBPA_bidel_18add_22 -NPM1-IDH2_p.R172t_8_21 inv_16-Sum of coefficients over GLM Models

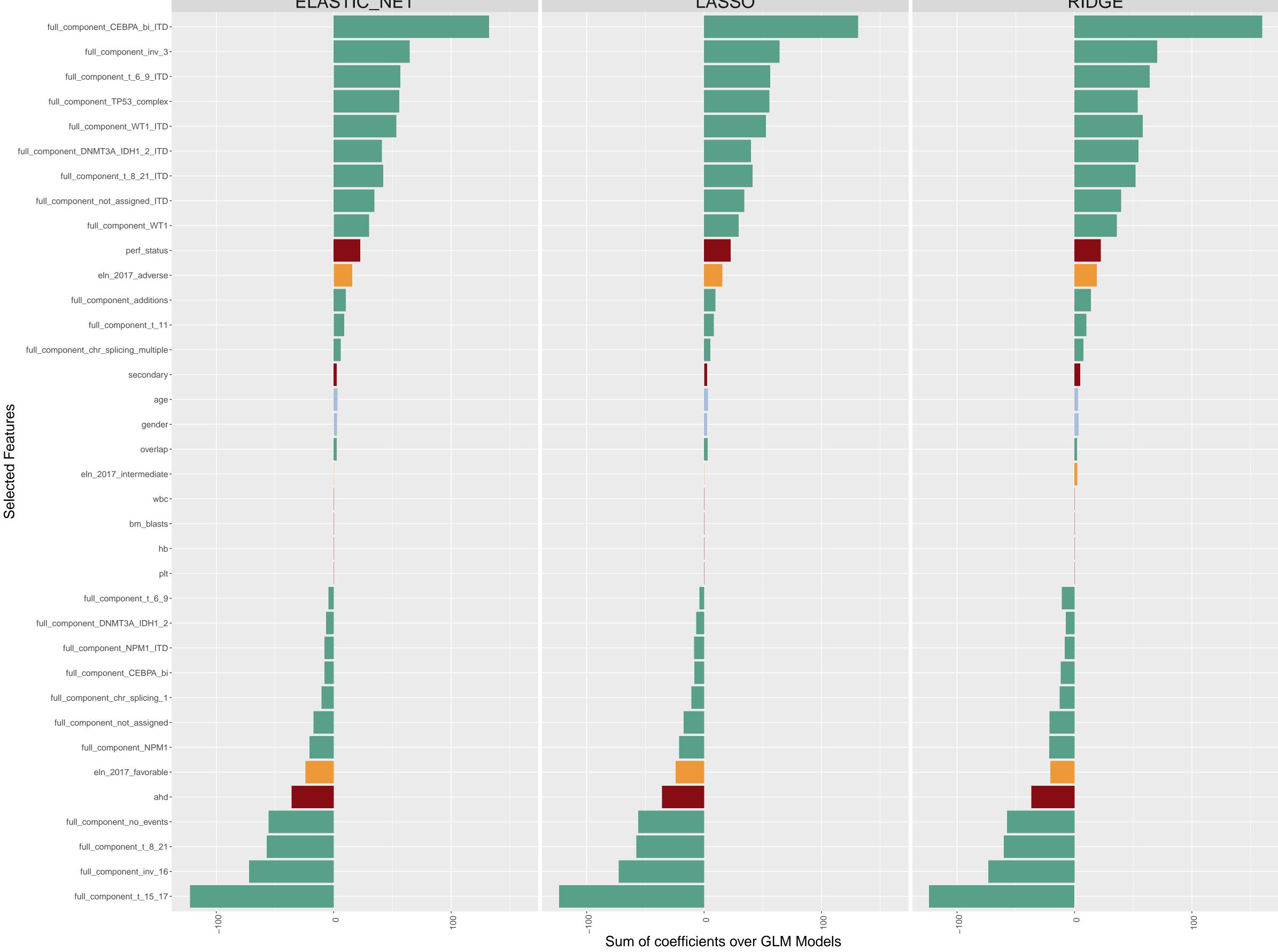
cyto Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX RIDGE t_8_21 inv_16 del_7 complex del_5 add_11 del_17t_v_11 others_translocminusydel_9 del_20 del_18del_16del_12add_8add_22 add_21 add_13-0.95 0.95 Ratio (ref_Cl/Permuted_Cl) 1.05 cyto Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE del_5 del_7 del_17 add_11 complex add_13del_20 minusy del_16-Selected Features add_8add_8others_translocadd_21 del_12t_v_11 del_9 del_3 del_18add_22 t_8_21 inv_16-- 20 20 Sum of coefficients over GLM Models

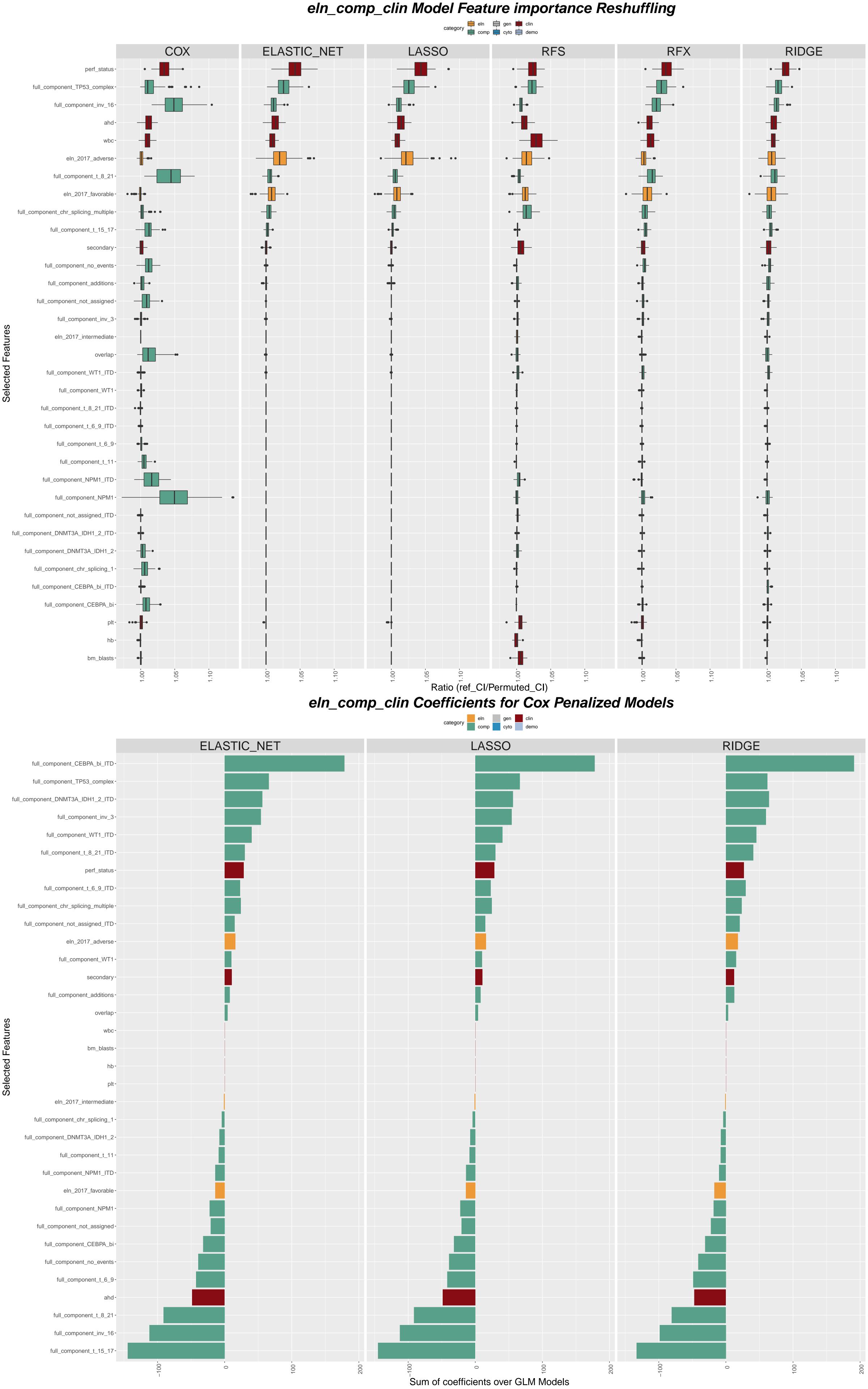
demo Model Feature importance Reshuffling ELASTIC_NET RIDGE COX LASSO RFS RFX Selected Features Ratio (ref_Cl/Permuted_Cl) demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE Selected Features Sum of coefficients over GLM Models

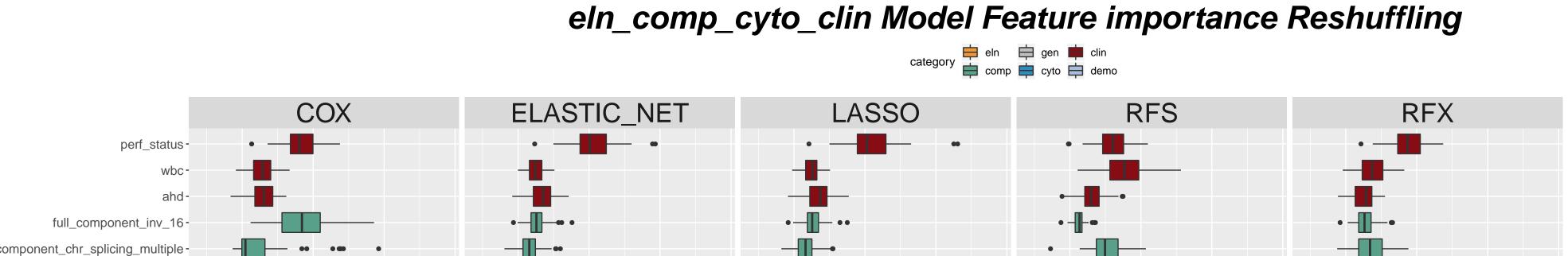


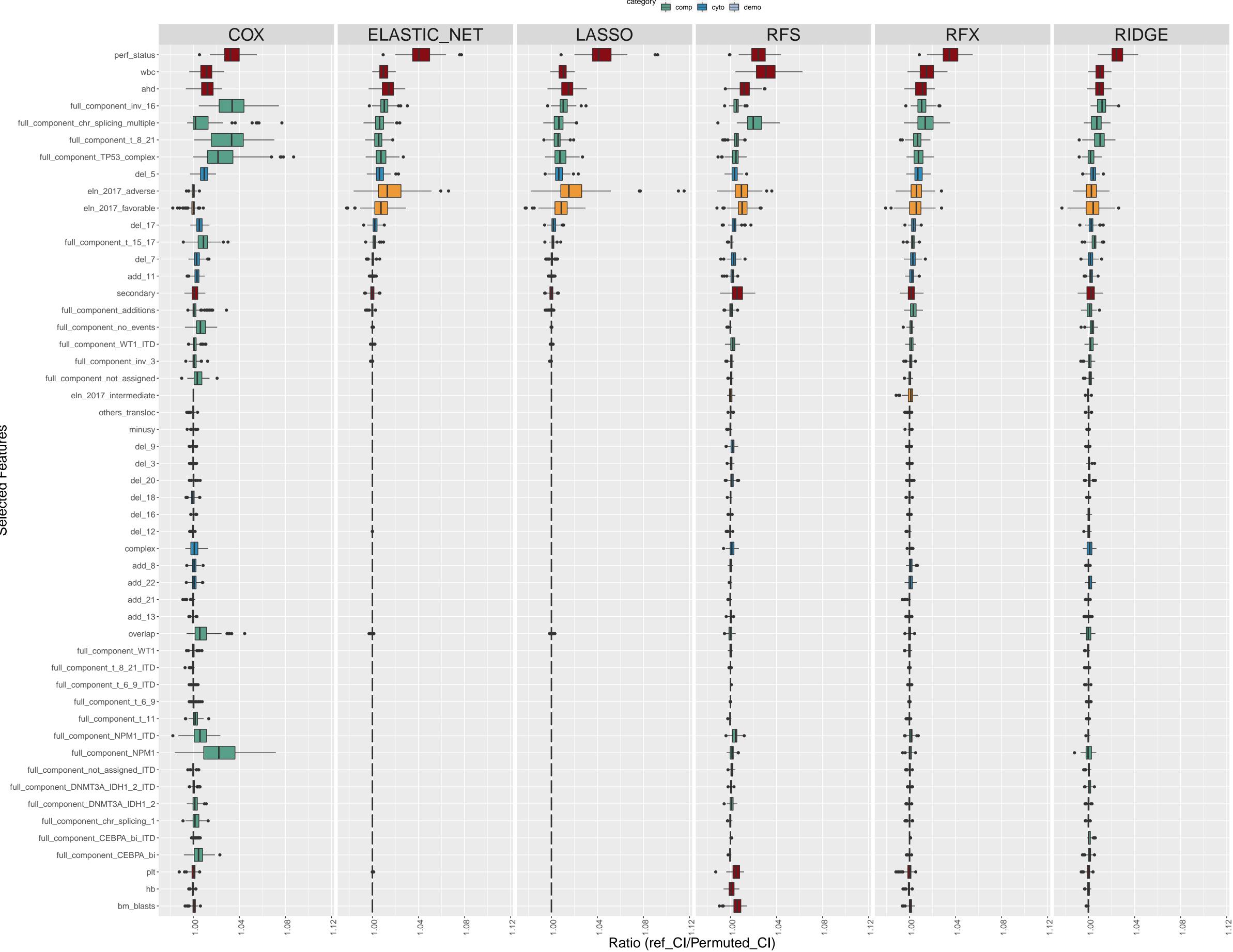


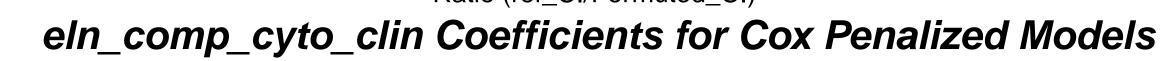
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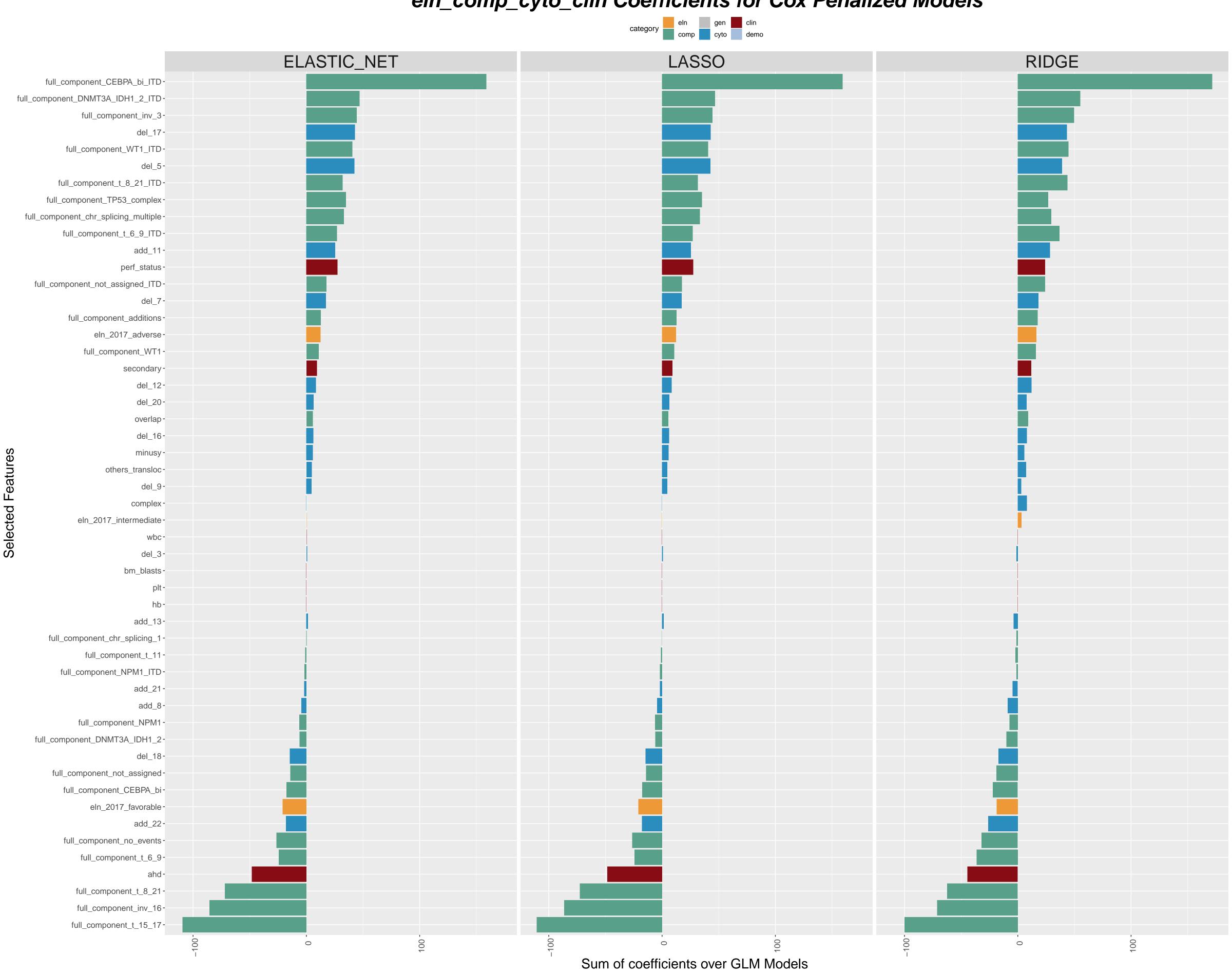


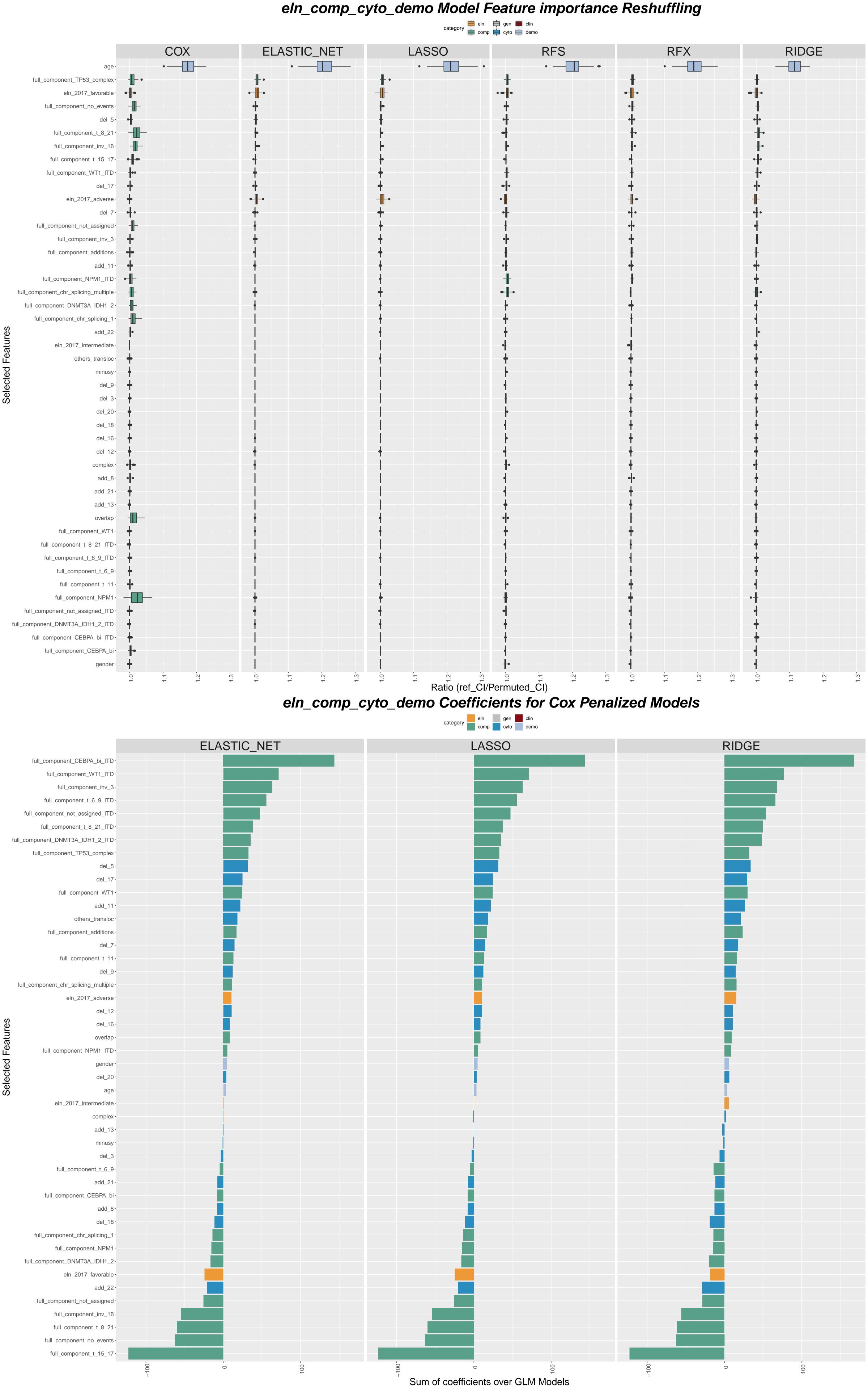




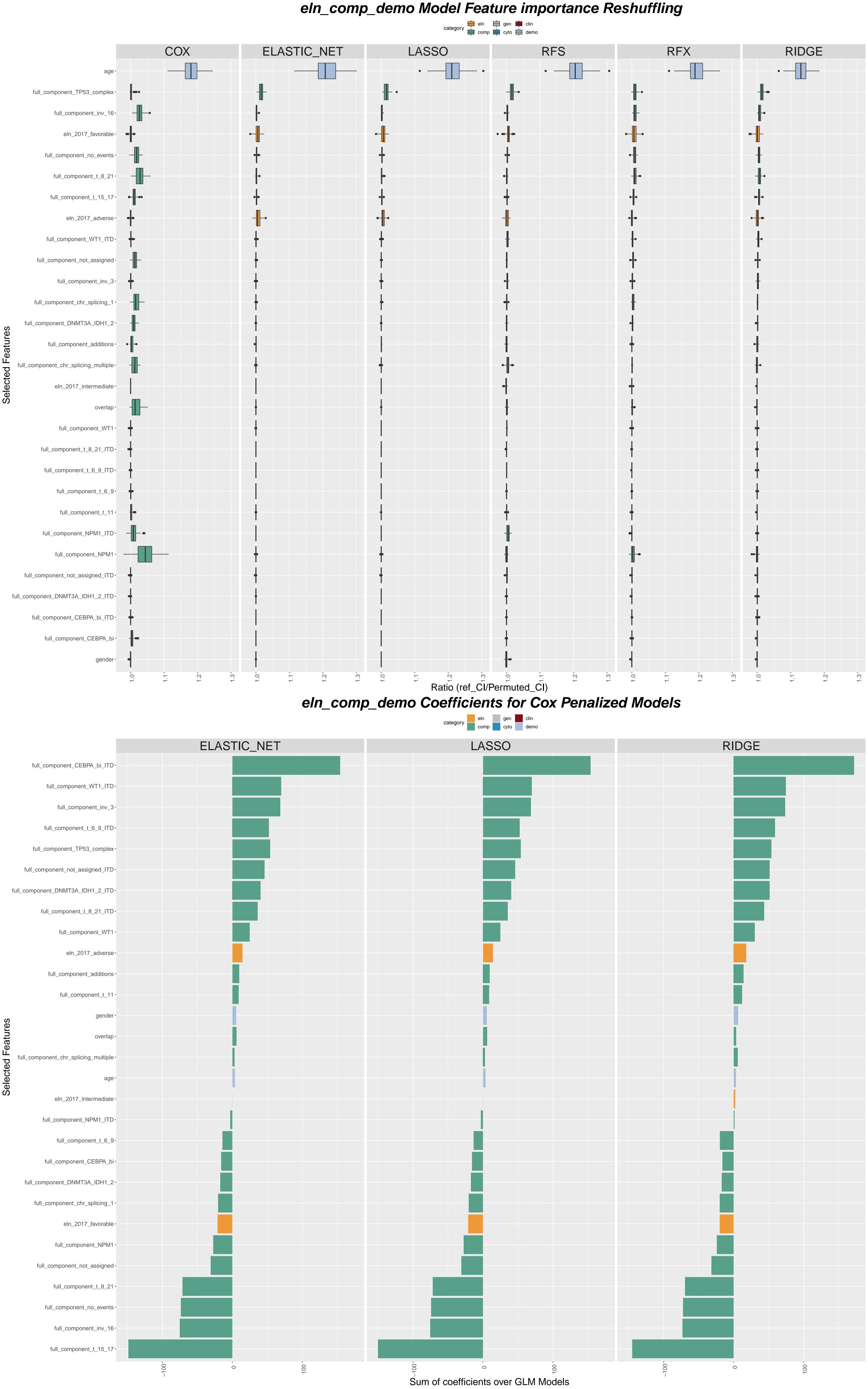


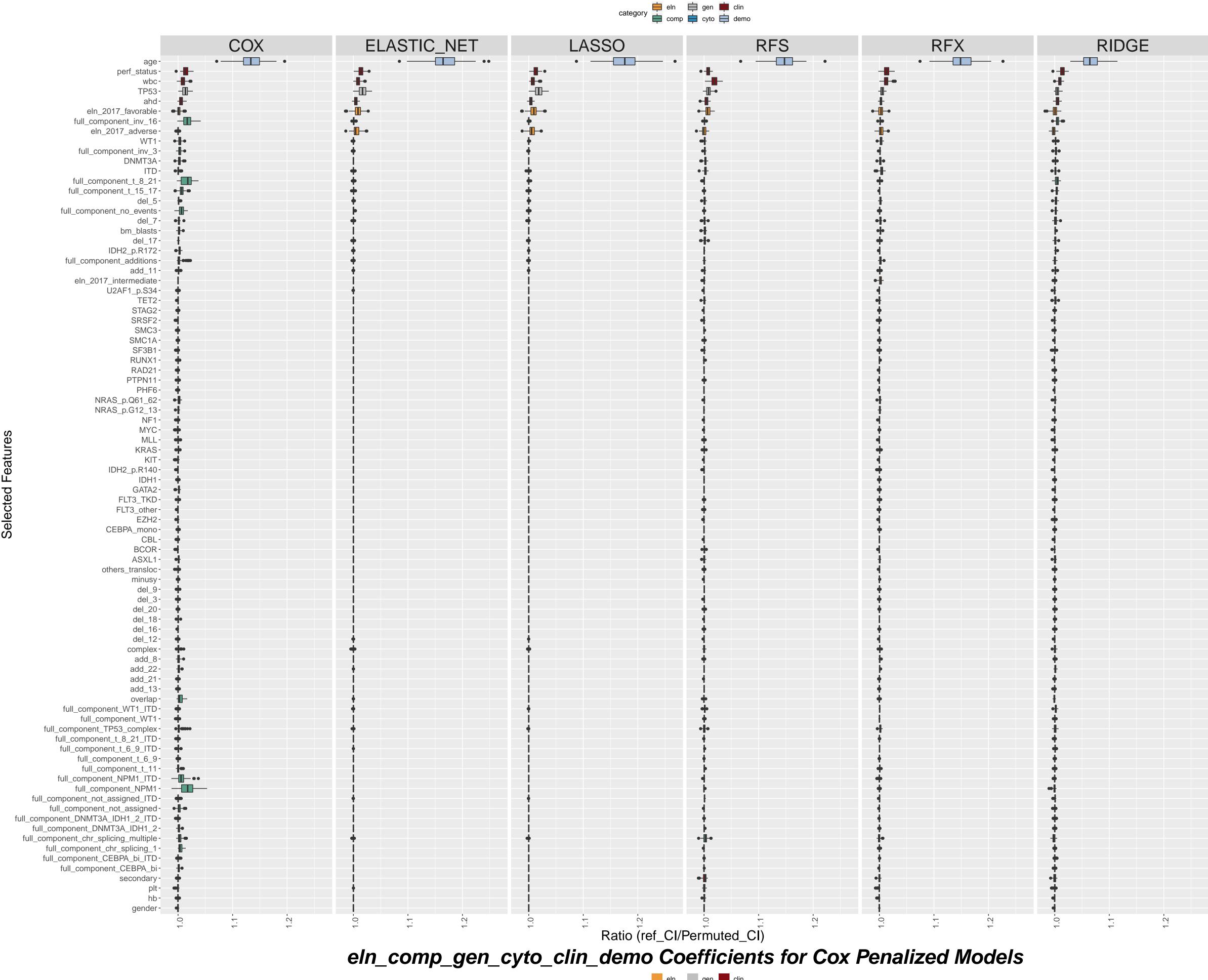


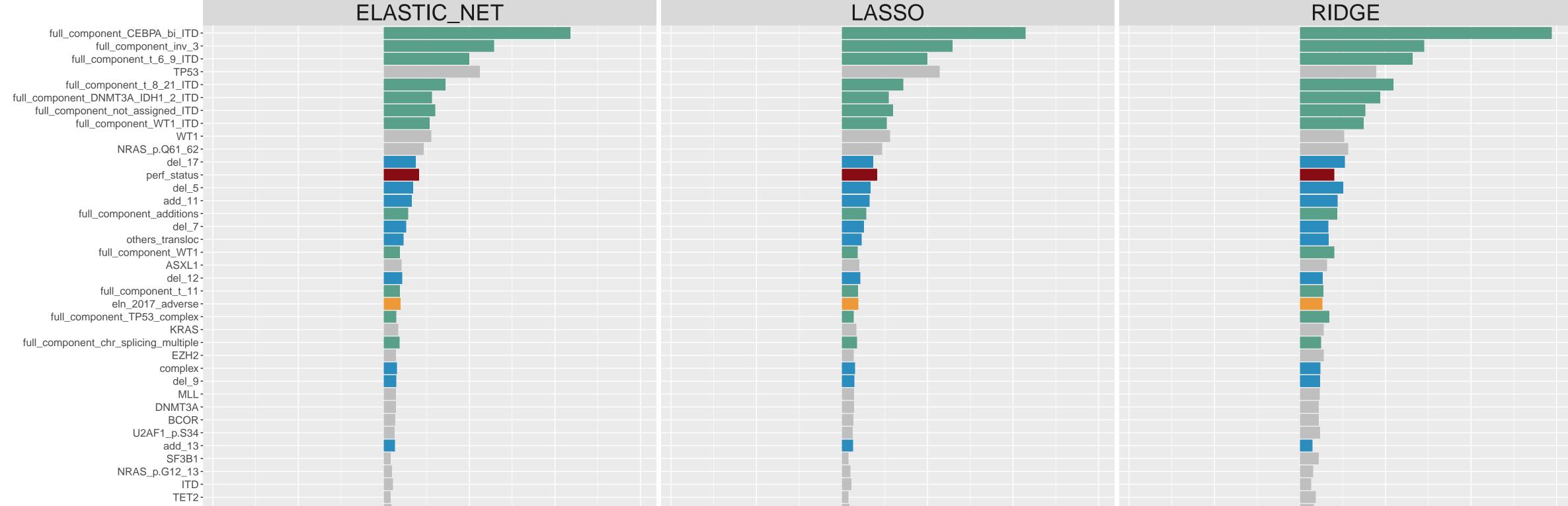




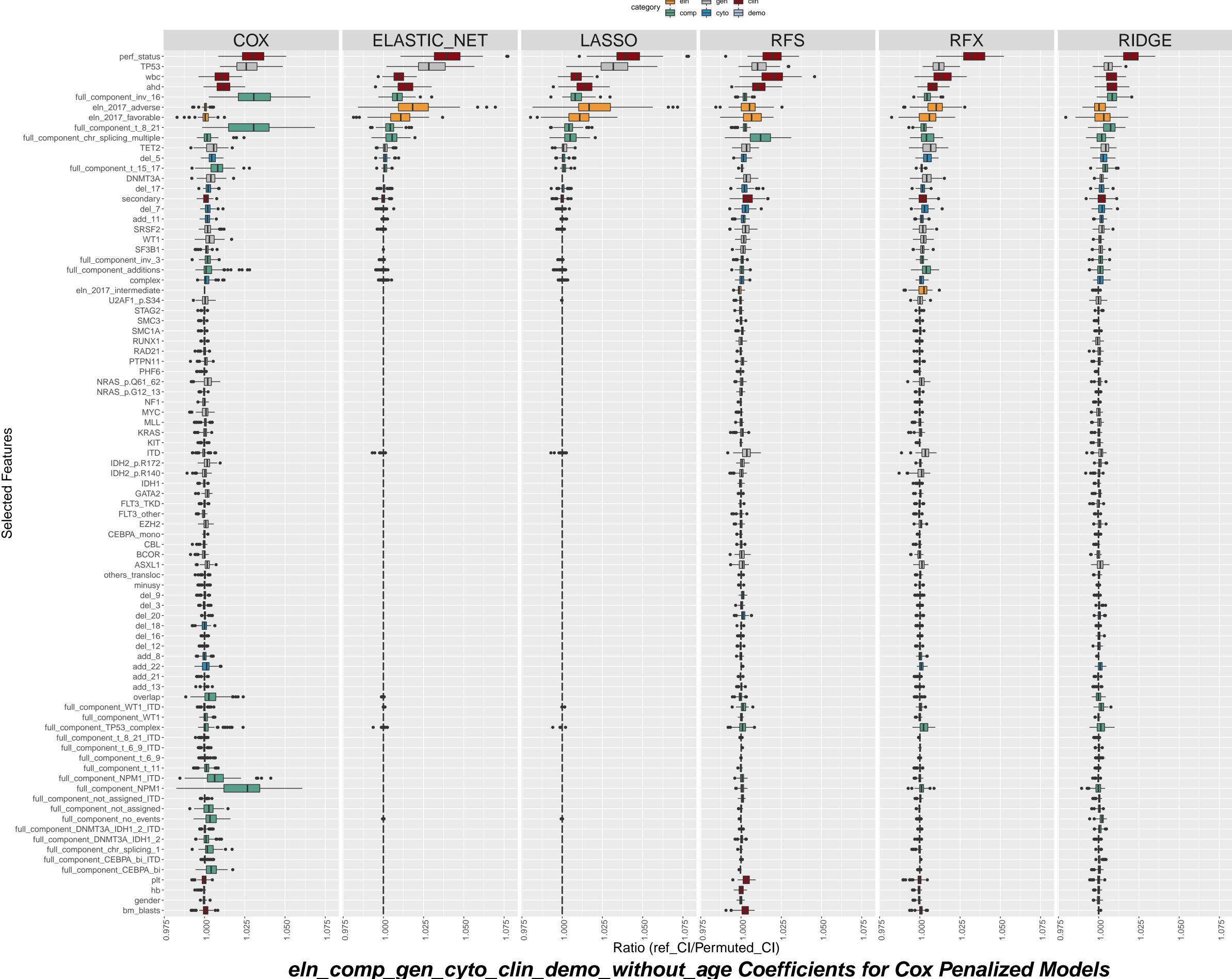
eln_comp_cyto Model Feature importance Reshuffling ELASTIC_NET COX LASSO RFS RIDGE RFX full_component_chr_splicing_multiplefull_component_t_8_21 full_component_inv_16full_component_TP53_complexeln_2017_adversedel_5 eln_2017_favorable full_component_t_15_17 full_component_no_events del_17full_component_additions del_7add_11 full_component_WT1_ITD eln_2017_intermediate others_translocminusydel_9 del_3del_20 del_18del_16del_12complex add_8add_22add_21 add_13overlapfull_component_WT1 full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11full_component_NPM1_ITDfull_component_NPM1 full_component_not_assigned_ITDfull_component_not_assignedfull_component_inv_3full_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1 full_component_CEBPA_bi_ITDfull_component_CEBPA_bi-Ratio (ref_CI/Permuted_CI) eln_comp_cyto Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE full_component_CEBPA_bi_ITDfull_component_WT1_ITD full_component_inv_3full_component_DNMT3A_IDH1_2_ITDdel_5 full_component_chr_splicing_multiplefull_component_TP53_complexdel_17full_component_t_8_21_ITD full_component_t_6_9_ITDfull_component_not_assigned_ITDadd_11 full_component_additions del_7del_16others_transloceln_2017_adversedel_20 minusy -Selected Features del_12overlap del_9 full_component_WT1full_component_NPM1_ITDcomplex eln_2017_intermediatedel_3full_component_t_11add_13full_component_chr_splicing_1 add_21 add_8full_component_NPM1 full_component_DNMT3A_IDH1_2eln_2017_favorable add_22full_component_not_assignedfull_component_CEBPA_bifull_component_t_6_9full_component_no_events full_component_inv_16 full_component_t_8_21 full_component_t_15_17-

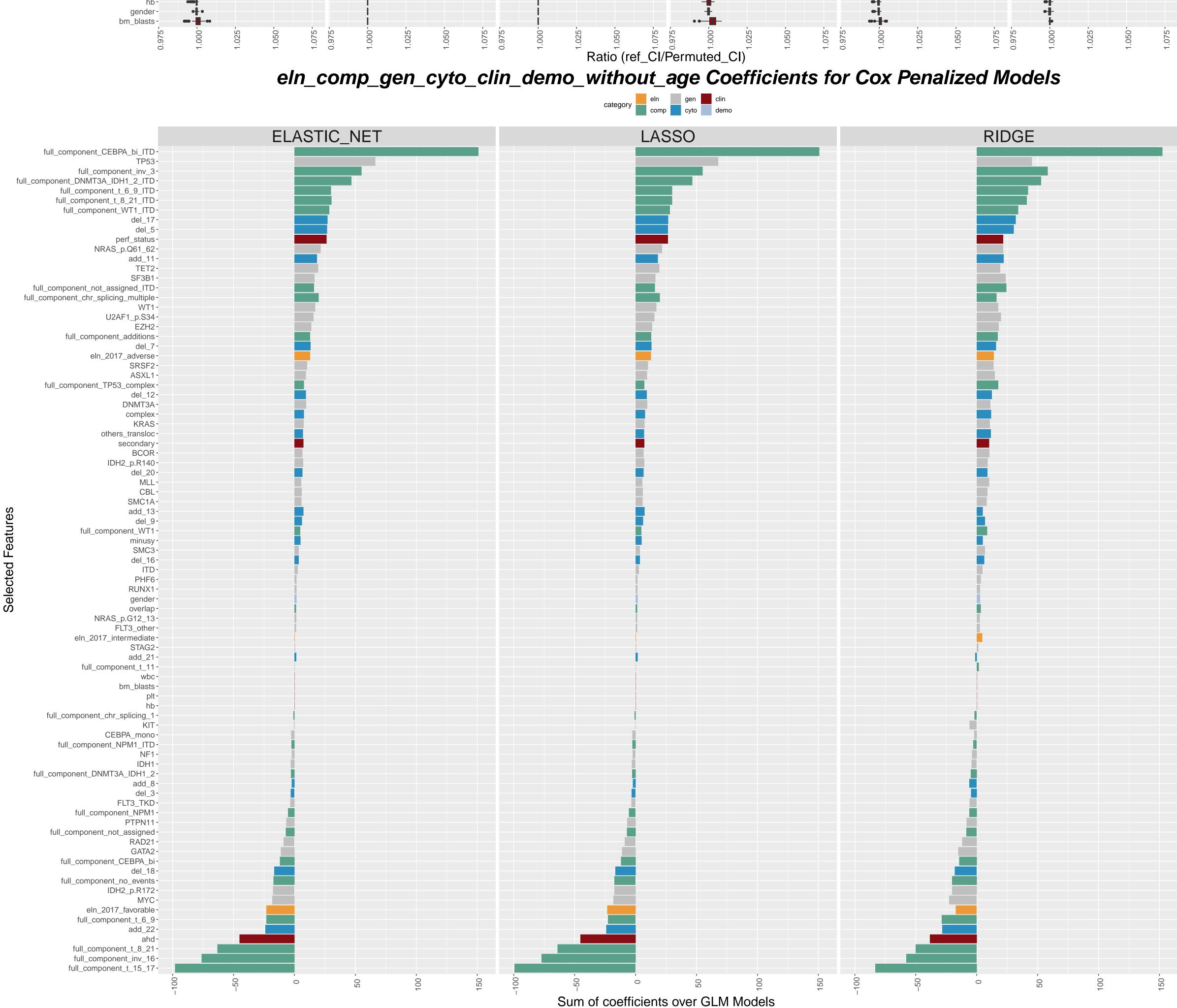






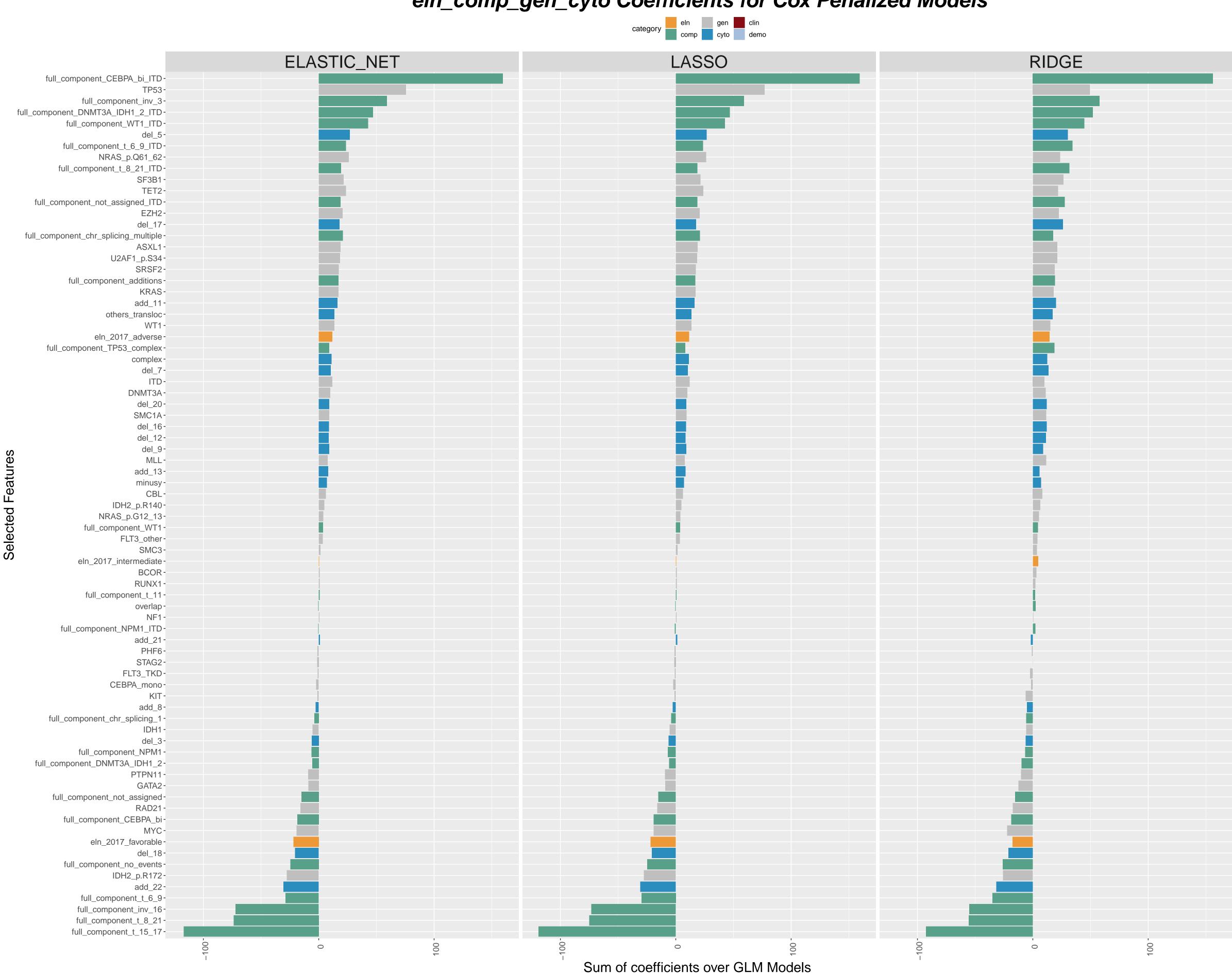
Selected Features



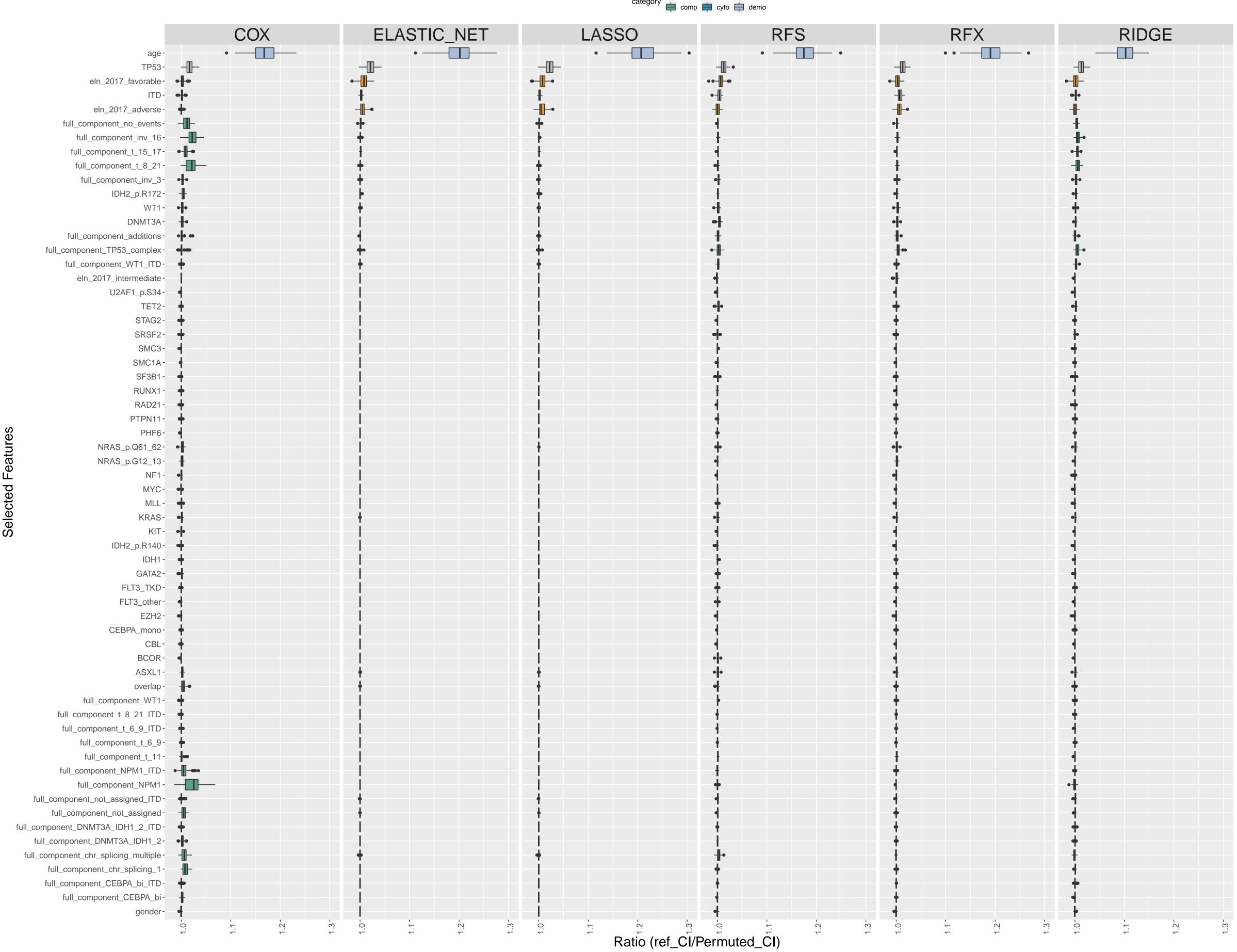


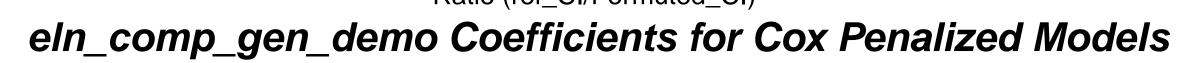
Features

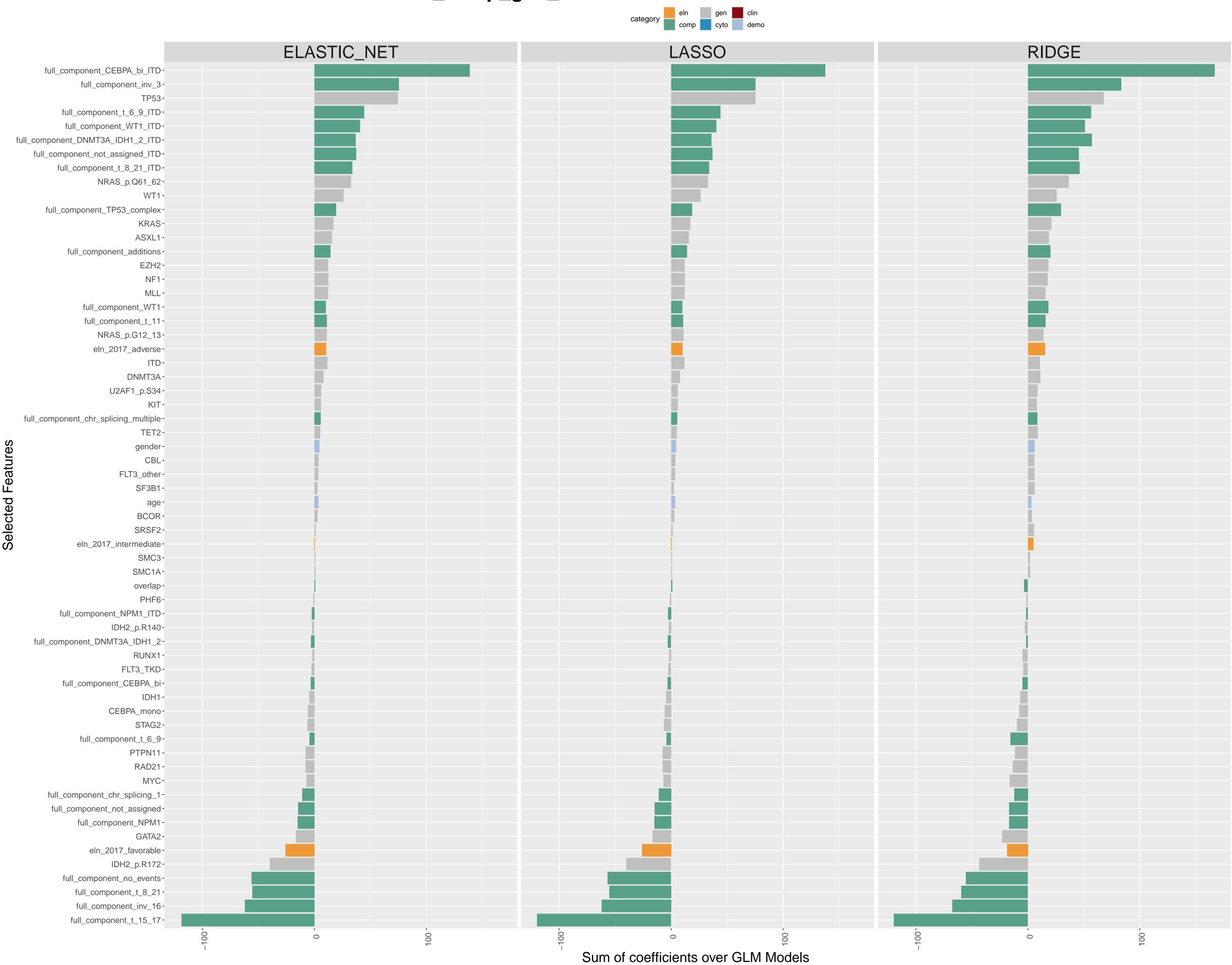
Selected



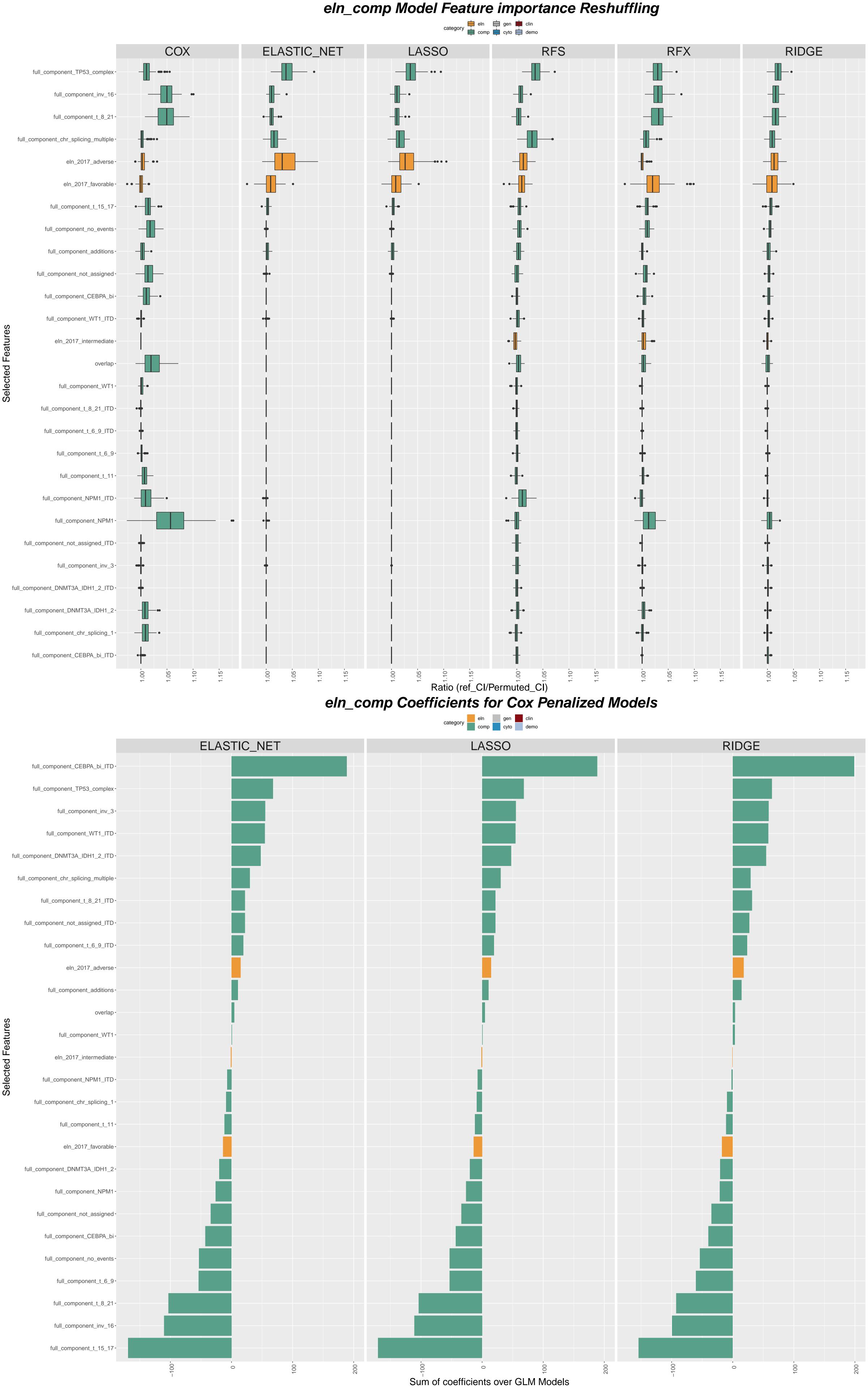
eln_comp_gen_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX age-TP53-

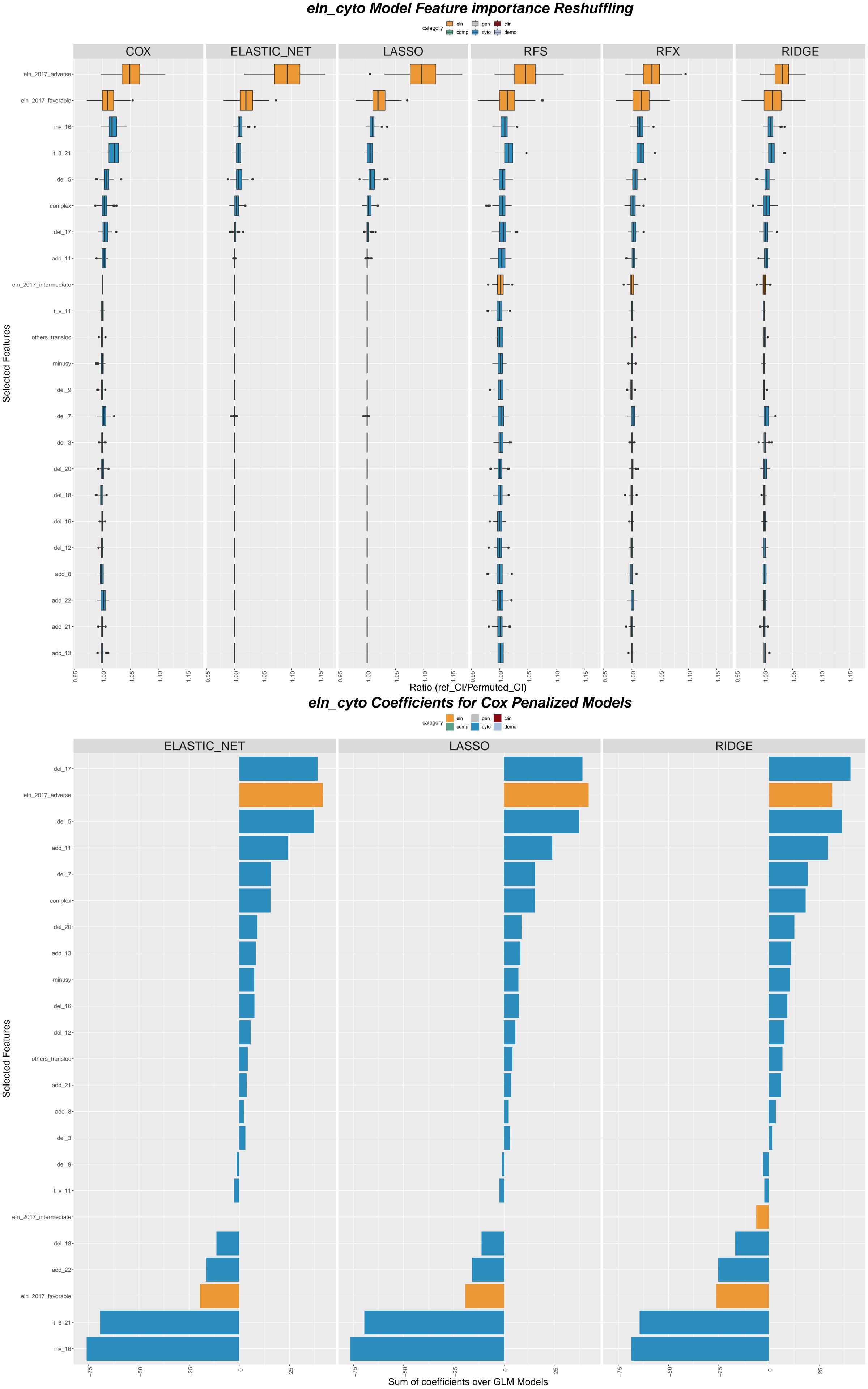


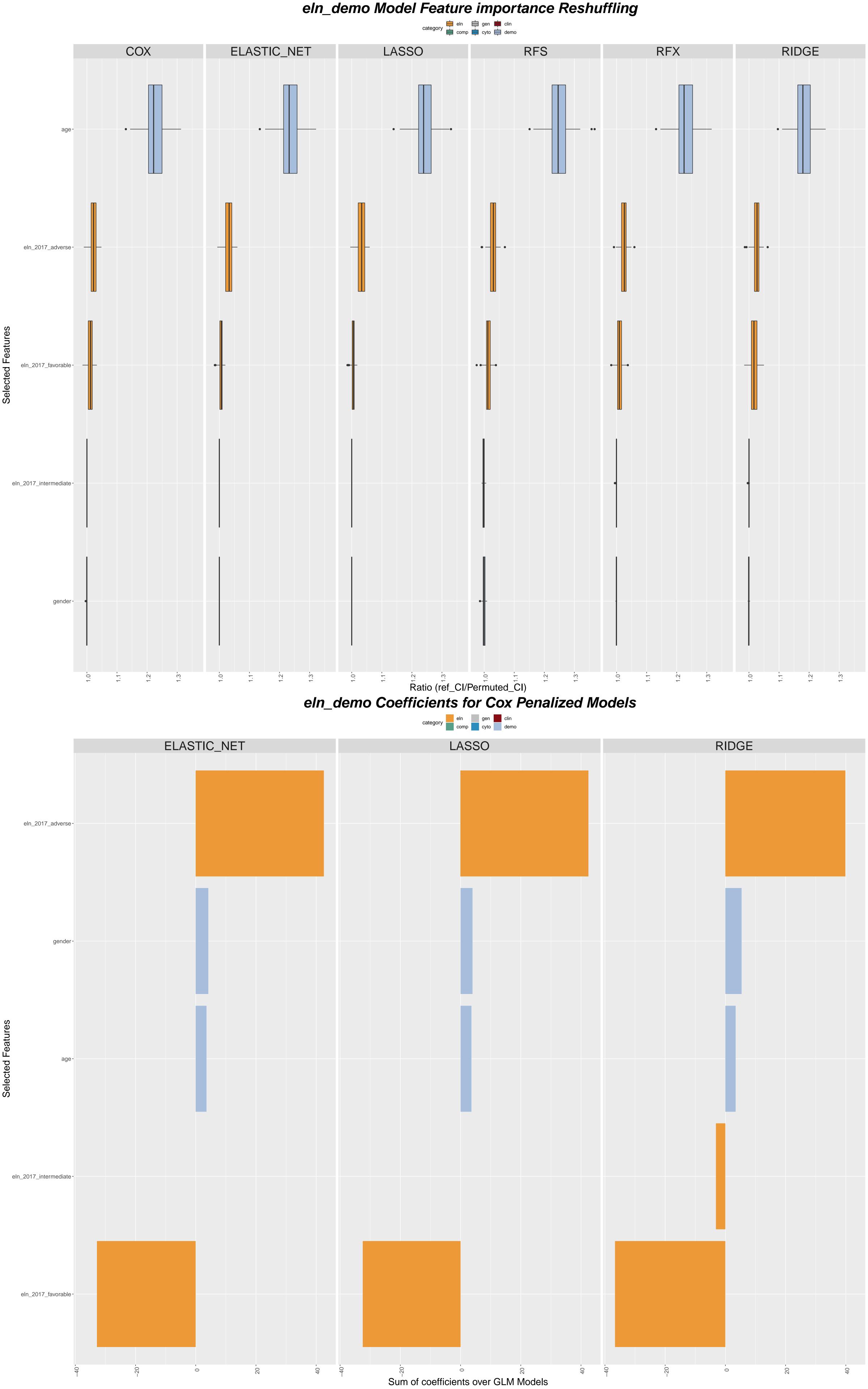




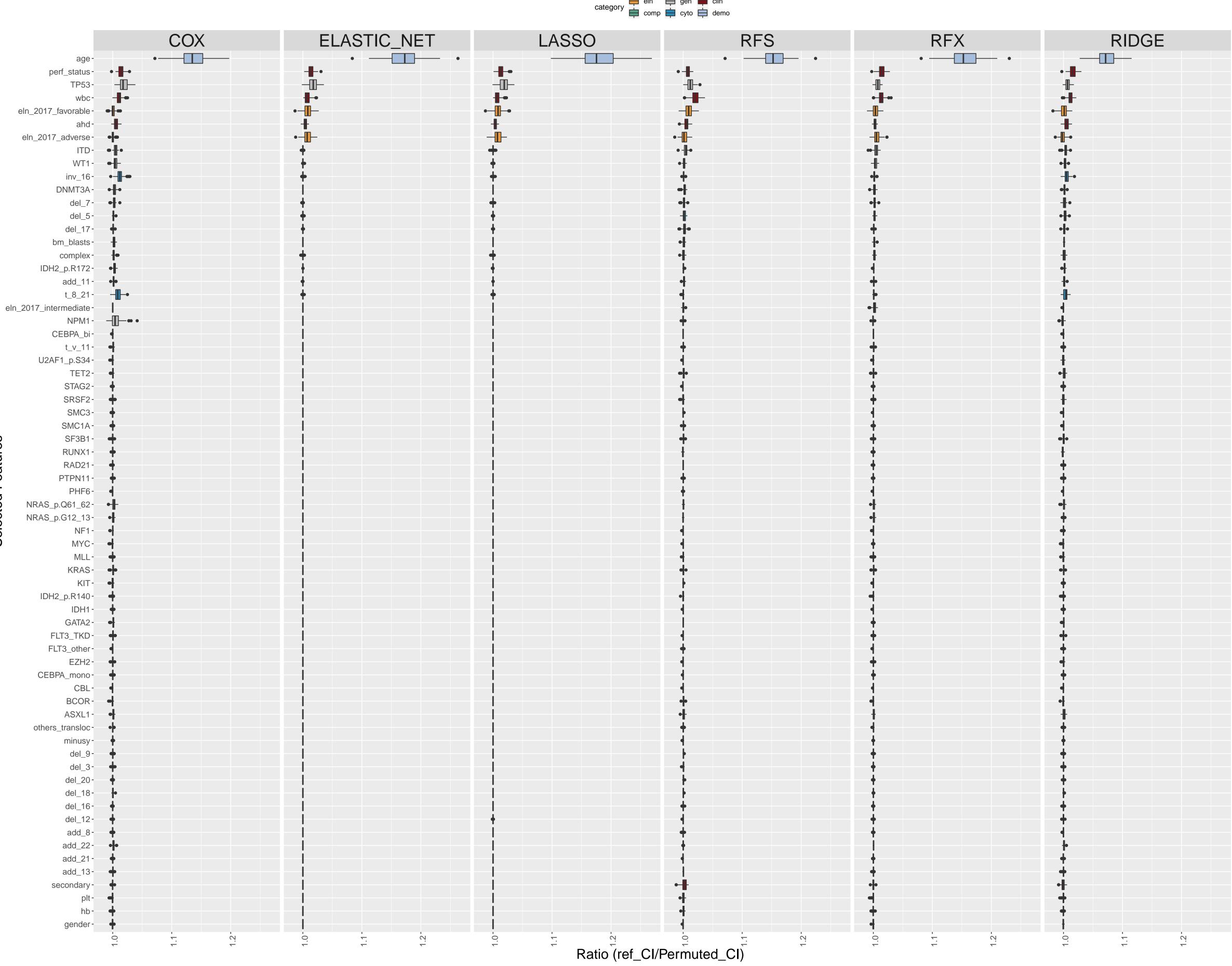
eln_comp_gen Model Feature importance Reshuffling comp cyto demo COX ELASTIC_NET LASSO RFS RIDGE RFX TP53eln_2017_adversefull_component_chr_splicing_multiple full_component_inv_16-•—— TET2full_component_t_8_21 eln_2017_favorable - • • • • • • • full_component_t_15_17 -SRSF2full_component_TP53_complex full_component_additions -DNMT3A-•••• •••• ITDfull_component_no_events -••-SF3B1-•---ASXL1-• full_component_inv_3-full_component_WT1_ITD -••• PTPN11eln_2017_intermediate -•-[]-• WT1 -U2AF1_p.S34-STAG2-SMC3-SMC1A-RUNX1-RAD21-PHF6-•--NRAS_p.Q61_62---NRAS_p.G12_13-----Selected NF1-----MYC--MLL-**---**KRAS-KIT-IDH2_p.R172-••• IDH2_p.R140-IDH1-GATA2-FLT3_TKD--FLT3_other-EZH2-CEBPA_mono-BCORoverlap full_component_WT1 full_component_t_8_21_ITDfull_component_t_6_9_ITDfull_component_t_6_9full_component_t_11 full_component_NPM1_ITDfull_component_NPM1 full_component_not_assigned_ITDfull_component_not_assignedfull_component_DNMT3A_IDH1_2_ITDfull_component_DNMT3A_IDH1_2full_component_chr_splicing_1-• full_component_CEBPA_bi_ITDfull_component_CEBPA_bi-1.08 Ratio (ref_CI/Permuted_CI) eln_comp_gen Coefficients for Cox Penalized Models **ELASTIC_NET** LASSO RIDGE full_component_CEBPA_bi_ITD-TP53full_component_inv_3full_component_DNMT3A_IDH1_2_ITDfull_component_WT1_ITD-NRAS_p.Q61_62full_component_t_8_21_ITDfull_component_TP53_complexfull_component_t_6_9_ITD-EZH2-SF3B1full_component_not_assigned_ITD-U2AF1_p.S34-SRSF2-KRAS-ASXL1eln_2017_adversefull_component_additions full_component_chr_splicing_multiple-WT1-DNMT3A-SMC1A-MLL-ITD-CBL-NRAS_p.G12_13-Selected Features IDH2_p.R140-NF1-FLT3_otherfull_component_WT1 -SMC3-BCOReln_2017_intermediate -RUNX1-KITfull_component_NPM1_ITDoverlap full_component_t_11 -CEBPA_mono-FLT3_TKD-STAG2full_component_DNMT3A_IDH1_2full_component_chr_splicing_1-PTPN11-GATA2full_component_NPM1 full_component_not_assignedeln_2017_favorable -RAD21full_component_CEBPA_bi-MYCfull_component_no_events-IDH2_p.R172full_component_t_6_9full_component_t_8_21 full_component_inv_16 full_component_t_15_17-Sum of coefficients over GLM Models



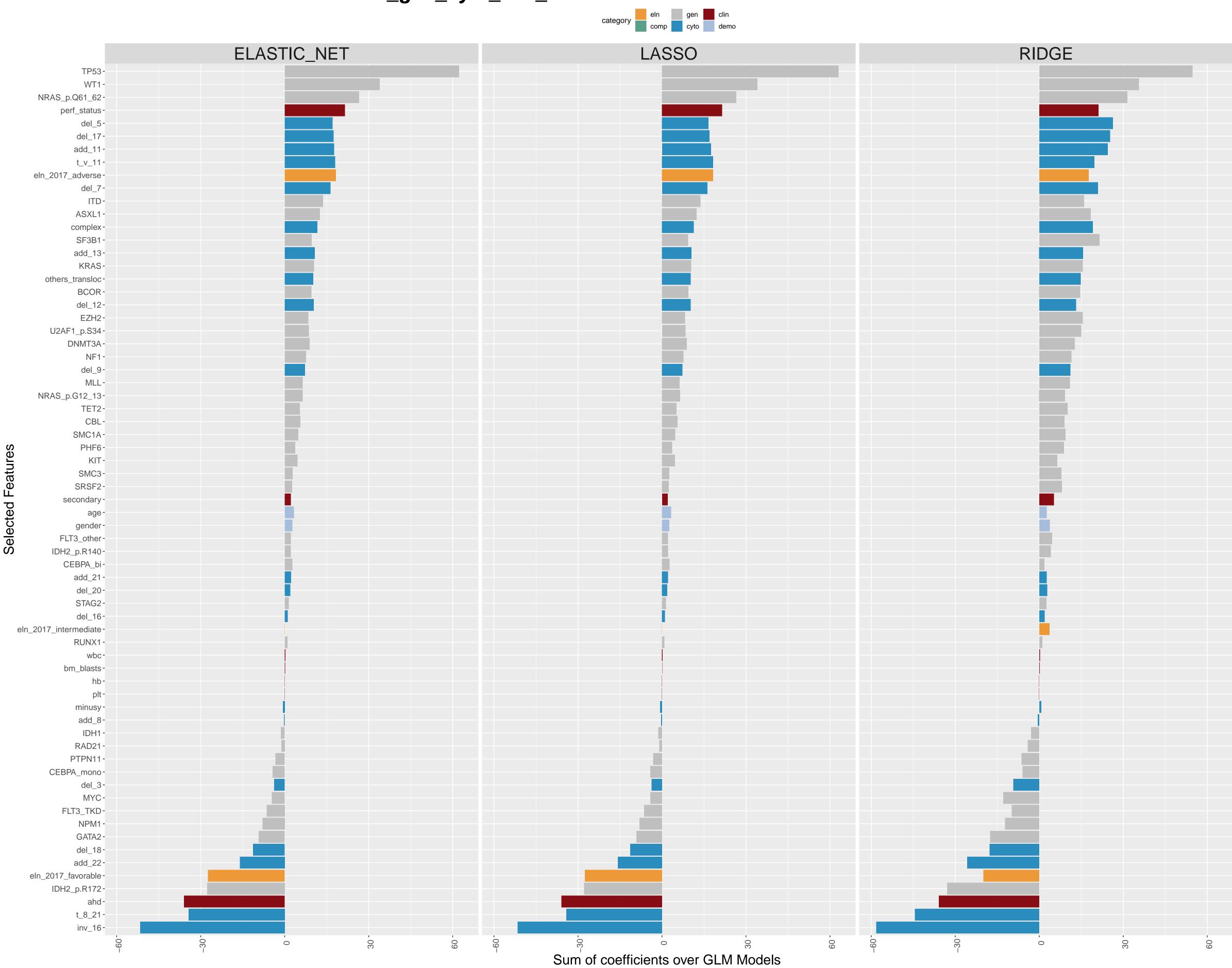




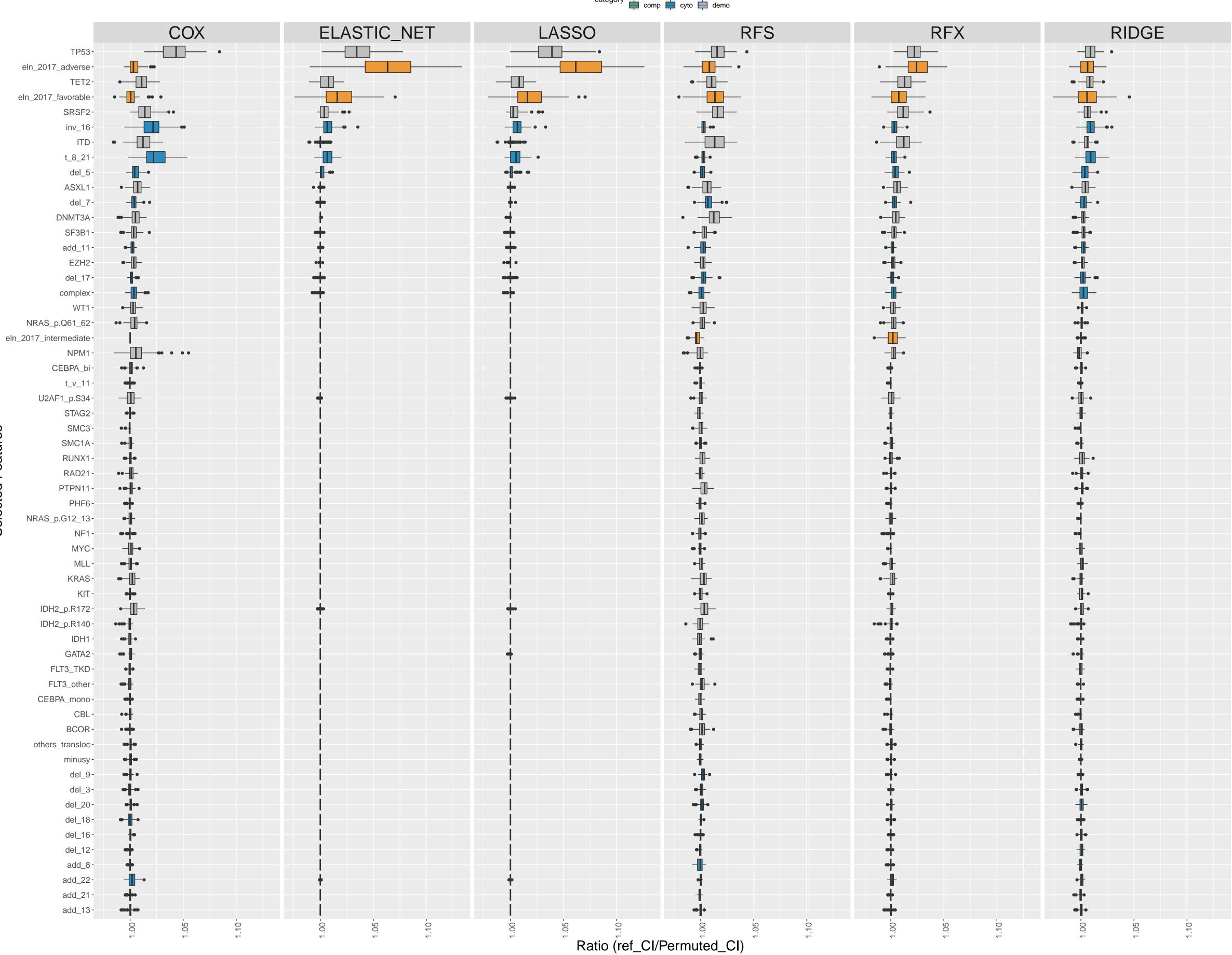
eln_gen_cyto_clin_demo Model Feature importance Reshuffling



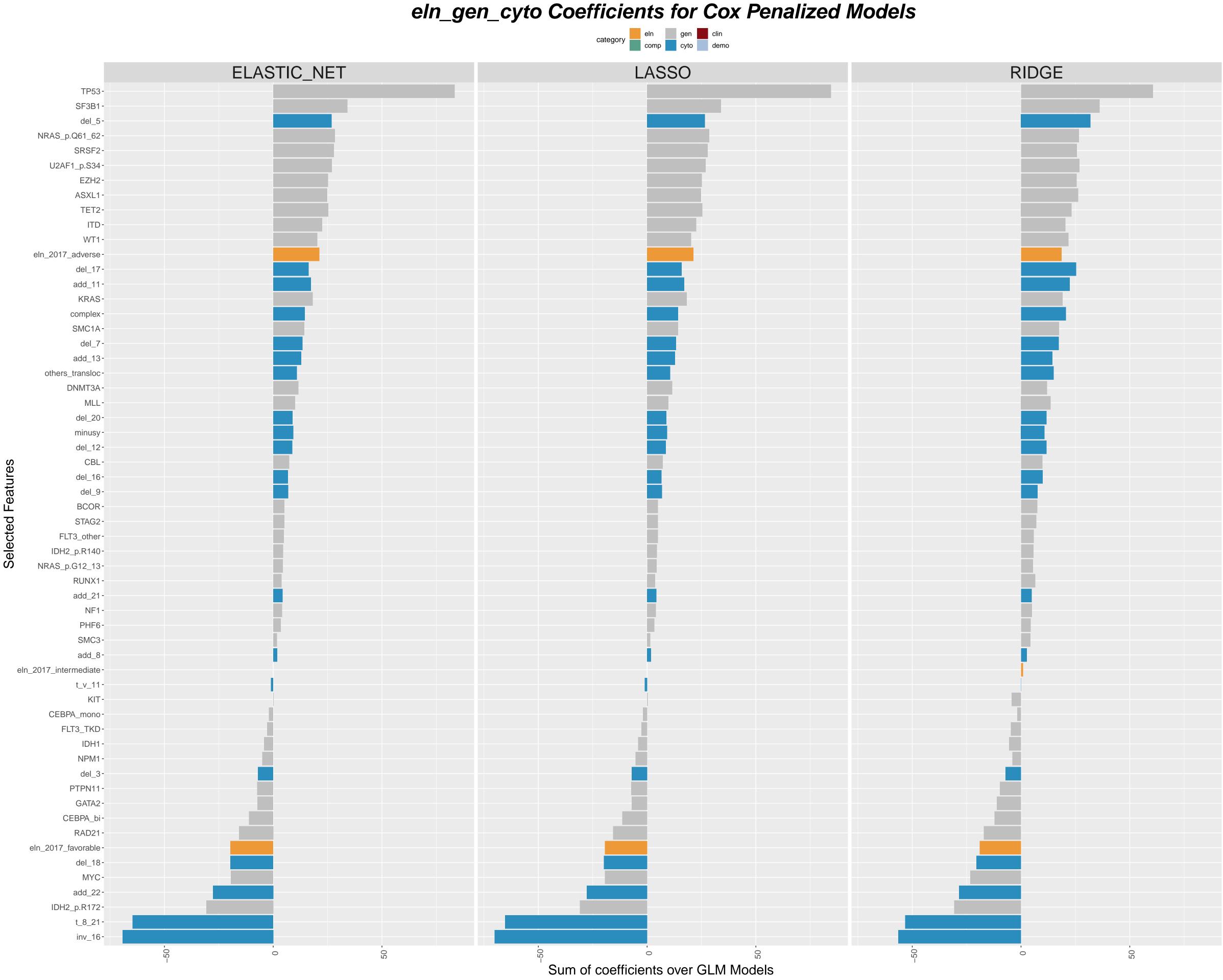




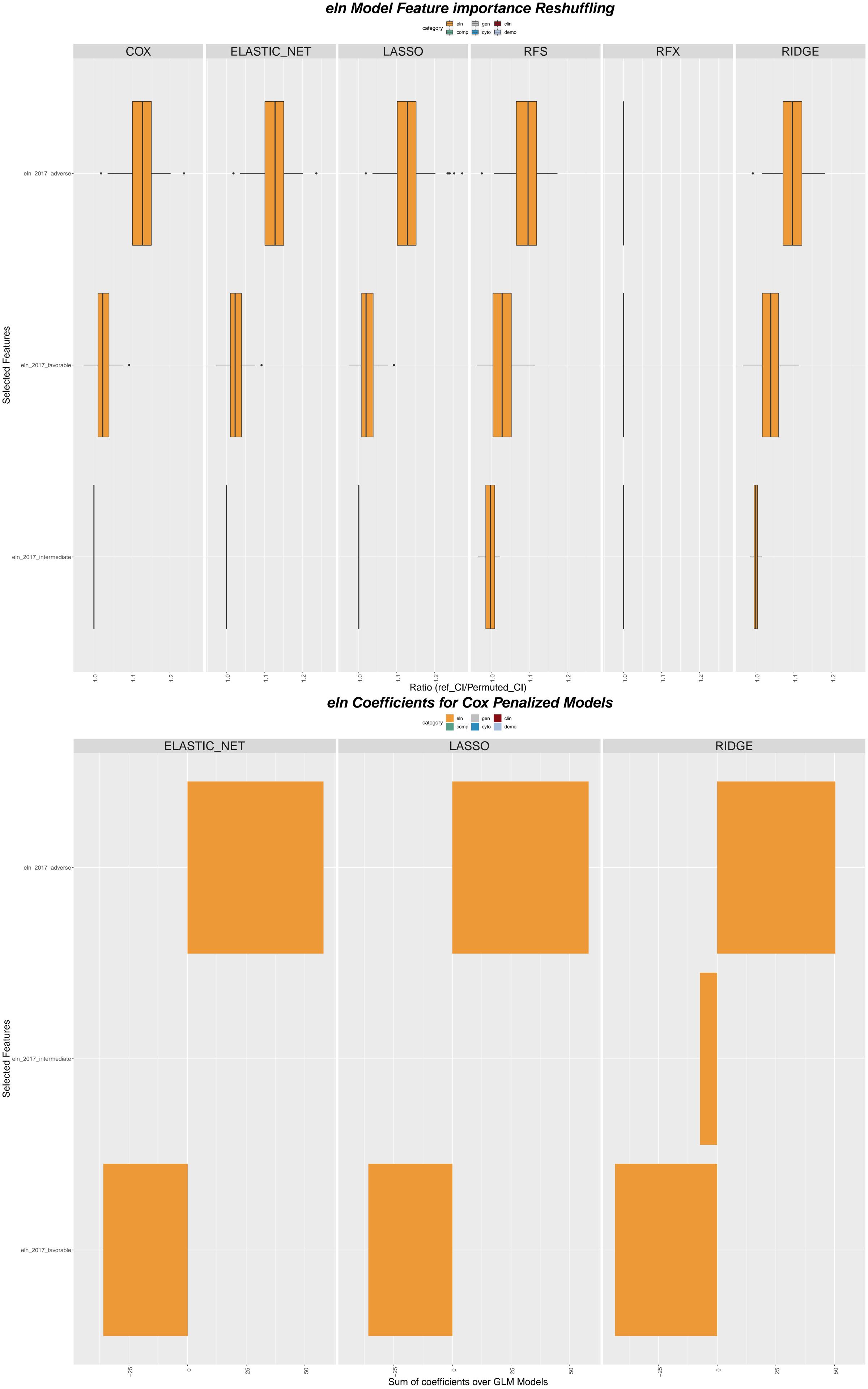
eln_gen_cyto Model Feature importance Reshuffling



eln_gen_cyto Coefficients for Cox Penalized Models







gen_clin_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RIDGE RFX perf_status wbc-NPM1 - •-ITD-WT1 -DNMT3A-ASXL1bm_blasts-RUNX1-IDH2_p.R172-CEBPA_bi-U2AF1_p.S34-TET2-STAG2-SRSF2-SMC3-SMC1A-SF3B1-RAD21 PTPN11-PHF6-NRAS_p.Q61_62-NRAS_p.G12_13- • NF1-MYC-KRAS-KIT-IDH2_p.R140-IDH1 GATA2-FLT3_TKD-FLT3_other-EZH2-CEBPA_mono-CBL BCORsecondary gender-Ratio (ref_CI/Permuted_CI) gen_clin_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-WT1 -ASXL1-ITD-MLLperf_status -SF3B1-BCOR-EZH2-NRAS_p.Q61_62-U2AF1_p.S34-DNMT3A-KRAS-NF1-RUNX1-TET2-NRAS_p.G12_13-SRSF2-PHF6-Selected Features secondary -CBL-IDH2_p.R140gender-FLT3_other-SMC1A-SMC3-STAG2wbcbm_blasts-IDH1 plthb-PTPN11-CEBPA_mono-RAD21-MYC-CEBPA_bi-FLT3_TKD-KIT-IDH2_p.R172-NPM1ahd-Sum of coefficients over GLM Models

gen_clin Model Feature importance Reshuffling COX **ELASTIC_NET RFS** RIDGE LASSO RFX TP53perf_status-TET2-SRSF2-RUNX1-ASXL1 ITD-DNMT3Asecondary-WT1-U2AF1_p.S34-EZH2-BCOR-CEBPA_bi-STAG2-SMC3-SMC1A-RAD21-PTPN11-NRAS_p.Q61_62-NRAS_p.G12_13-NF1 MYC-KRAS-IDH2_p.R172-GATA2-FLT3_TKD-FLT3_other-CEBPA_mono-CBLbm_blasts-Ratio (ref_Cl/Permuted_Cl) gen_clin Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-SF3B1-U2AF1_p.S34-WT1-TET2perf_status-EZH2-SRSF2-MLL-ASXL1-BCOR-RUNX1-DNMT3A-ITDsecondary-IDH2_p.R140-KRAS-NRAS_p.Q61_62-PHF6-Selected Features SMC1A-CBL-STAG2-FLT3_other-SMC3-IDH1 -NRAS_p.G12_13-NF1wbcbm_blastsplt-CEBPA_mono-PTPN11-GATA2-FLT3_TKD-RAD21-IDH2_p.R172-MYC-

Sum of coefficients over GLM Models

100

CEBPA_bi-

NPM1-

KIT-

ahd-

gen_cyto_clin_demo Model Feature importance Reshuffling COX ELASTIC_NET LASSO RFS RFX RIDGE •——• -TP53perf_status complex-ASXL1-DNMT3Aadd_11 del_17 bm_blasts-IDH2_p.R172-CEBPA_bit_v_11 -U2AF1_p.S34-TET2-STAG2-SRSF2-SMC3-SMC1A-SF3B1-RAD21 -PTPN11-PHF6-KRAS-IDH2_p.R140-GATA2-FLT3_TKD-FLT3_other-EZH2-CEBPA_mono-CBL-BCORothers_translocminusydel_9 del_20 del_18del_16del_12add_8 add_22add_21 add_13secondaryhbgender-RUNX1-Ratio (ref_CI/Permuted_CI) gen_cyto_clin_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-WT1-NRAS_p.Q61_62del_7 perf_status del_5 -ASXL1add_11 complex t_v_11 del_17-ITD-SF3B1 -MLL-BCOR-KRASadd_13others_transloc-U2AF1_p.S34-EZH2del_12 -DNMT3Adel_9 -NF1-NRAS_p.G12_13-CBL-TET2-PHF6-Selected Features RUNX1-SRSF2-SMC1A-KIT-FLT3_othersecondary -SMC3add_21 genderagedel_20 -STAG2del_16-IDH2_p.R140add_8wbcbm_blastshbplt minusy -IDH1 -RAD21-PTPN11-CEBPA_monodel_3-

Sum of coefficients over GLM Models

40

FLT3_TKD-

CEBPA_bi-

MYC-

GATA2-

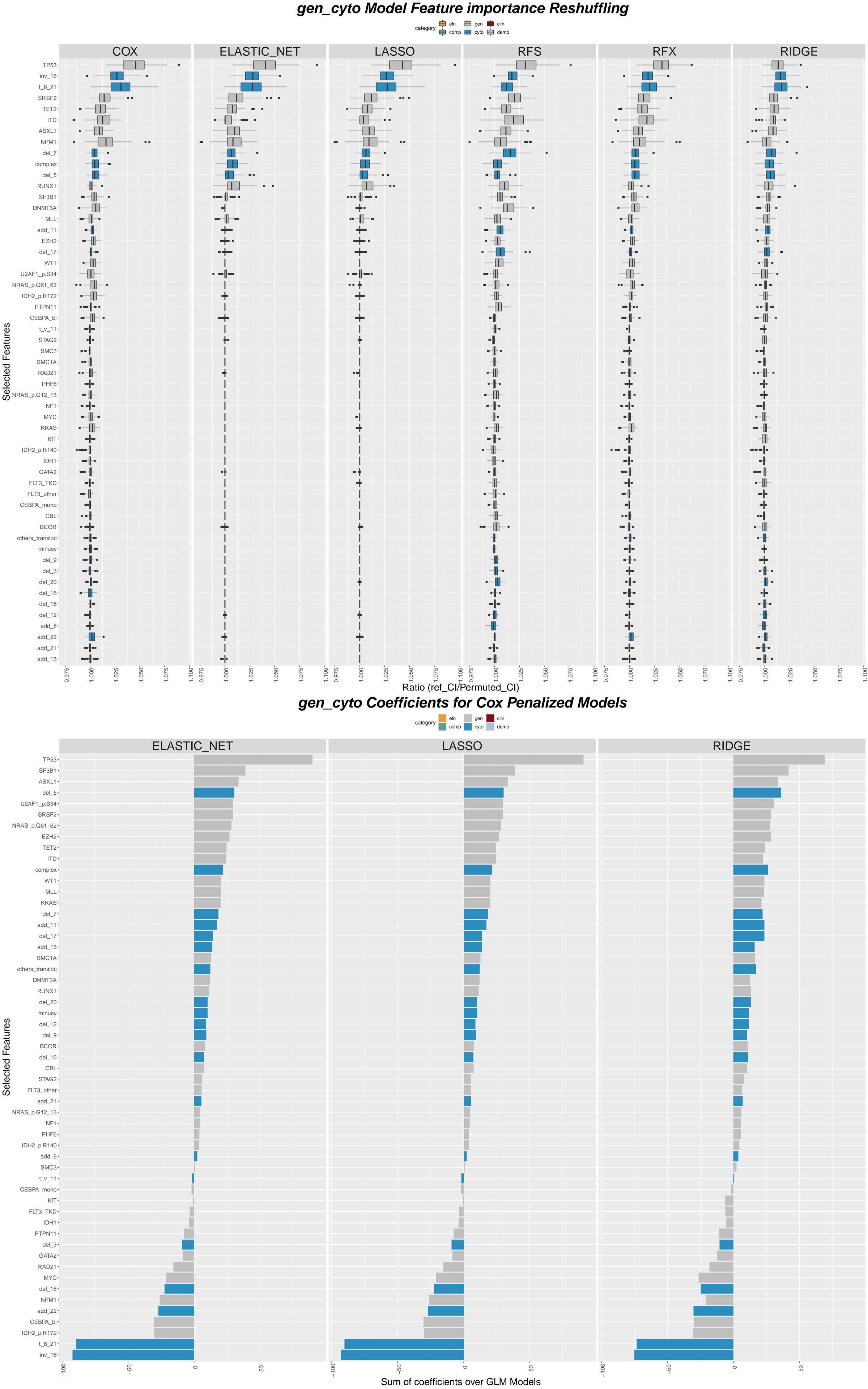
add_22-

NPM1-

t_8_21 inv_16 -

ahd-

IDH2_p.R172-



gen_demo Model Feature importance Reshuffling ELASTIC_NET COX LASSO RFS RFX RIDGE ITD-ASXL1-WT1-DNMT3A-RUNX1-IDH2_p.R172 -CEBPA_bi-U2AF1_p.S34-TET2-STAG2-SRSF2-SMC3-SMC1A-SF3B1-RAD21-PTPN11-PHF6-NRAS_p.Q61_62-NRAS_p.G12_13- • NF1-MYC-KRAS-IDH2_p.R140-IDH1 -GATA2-FLT3_TKD-FLT3_other-EZH2-CEBPA_mono-CBL BCORgender-Ratio (ref_Cl/Permuted_Cl) gen_demo Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-WT1-ITD-ASXL1-MLL-KRAS-NRAS_p.Q61_62-EZH2-SF3B1-NF1-U2AF1_p.S34-DNMT3A-NRAS_p.G12_13-SRSF2-TET2-BCOR-Selected Features RUNX1-PHF6gender-FLT3_other-CBLage-SMC1A-IDH2_p.R140-IDH1 -STAG2-SMC3-CEBPA_mono-PTPN11-MYC-FLT3_TKD-RAD21 -GATA2-CEBPA_bi-KIT-NPM1-IDH2_p.R172-

gen Model Feature importance Reshuffling ELASTIC_NET COX LASSO RFS RFX RIDGE TP53-SRSF2-TET2-ITD-ASXL1 RUNX1-SF3B1 NPM1-DNMT3A-U2AF1_p.S34-EZH2-CEBPA_bi-STAG2-SMC3-SMC1A-RAD21 -PTPN11-PHF6-NRAS_p.Q61_62-NRAS_p.G12_13-NF1-MYC-KRAS-IDH2_p.R172-IDH2_p.R140-IDH1 -GATA2-FLT3_TKD-FLT3_other-CEBPA_mono-CBL-BCOR-Ratio (ref_CI/Permuted_CI) gen Coefficients for Cox Penalized Models ELASTIC_NET LASSO RIDGE TP53-SF3B1-U2AF1_p.S34-SRSF2-ASXL1-EZH2-ITD-MLL-WT1 -KRAS-DNMT3A-RUNX1-BCOR-NRAS_p.Q61_62-Selected Features SMC1A-IDH2_p.R140-NF1-STAG2-CBL-PHF6-FLT3_other-NRAS_p.G12_13-CEBPA_mono-SMC3-

IDH1 -

GATA2-

PTPN11-

FLT3_TKD-

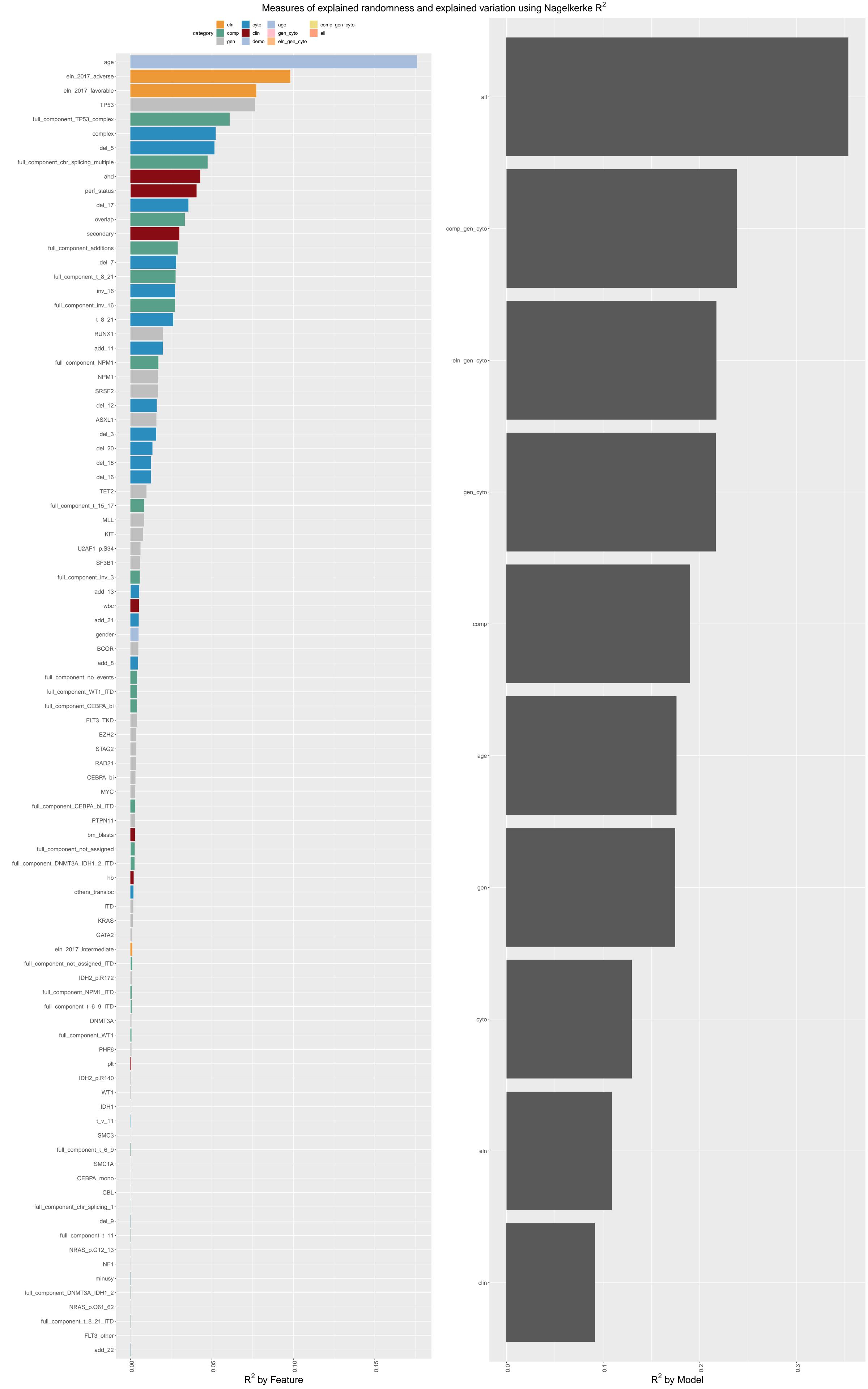
MYC-

RAD21-

CEBPA_bi-

KIT-

IDH2_p.R172-



Age Impact on feature importance model eln_comp_gen_cyto_clin_demo eln_comp_gen_cyto_clin_demo_without_age RFS RFX Cox Elastic_net Lasso Ridge TET2-SRSF2-1.00 1.01 1.01 Ratio (ref_Cl/Permuted_Cl)

Age Impact on feature importance model eln_comp_gen_cyto_clin_demo eln_comp_gen_cyto_clin_demo_without_age ELASTIC_NET LASSO RFS BOOST TET2-SRSF2-- 09 0 - 0 0 - 09 - 09 Proportion of selection count overall models and algorithms 100 150-100-