Independent study

```
data <- read.csv('C:/Users/17143/Desktop/Indpendent_Study/DIADEMwithProteomics_remission.csv', header =
```

Data cleaning

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
data <- data %>% mutate(ExSmoker = ifelse(ExSmoker == "No",0,1))
nums <- unlist(lapply(data, is.numeric))
data <- data[ , nums]
c <- c(2:11645)
data <- data[,c]
data[is.na(data)] <- 0
data <- data %>% select(-6786,-1282,-11614,-1246,-6785,-6781)
data <- data[,!grepl("hba1c",colnames(data))]
data <- data[,!grepl("HbA1c",colnames(data))]
data <- data[,!grepl("HOMA",colnames(data))]
data <- data[,!grepl("homa",colnames(data))]
data <- data[,!grepl("remission_",colnames(data))]
data <- data[,!grepl("compremission",colnames(data))]
```

Train and Test data

```
smp_size <- 0.8*nrow(data)
train_ind <- sample(seq_len(nrow(data)),size=smp_size)
data_train <- (data[train_ind,])
data_test <- (data[-train_ind,])
```

Lasso version of Logistic Regression

```
library(glmnet)
```

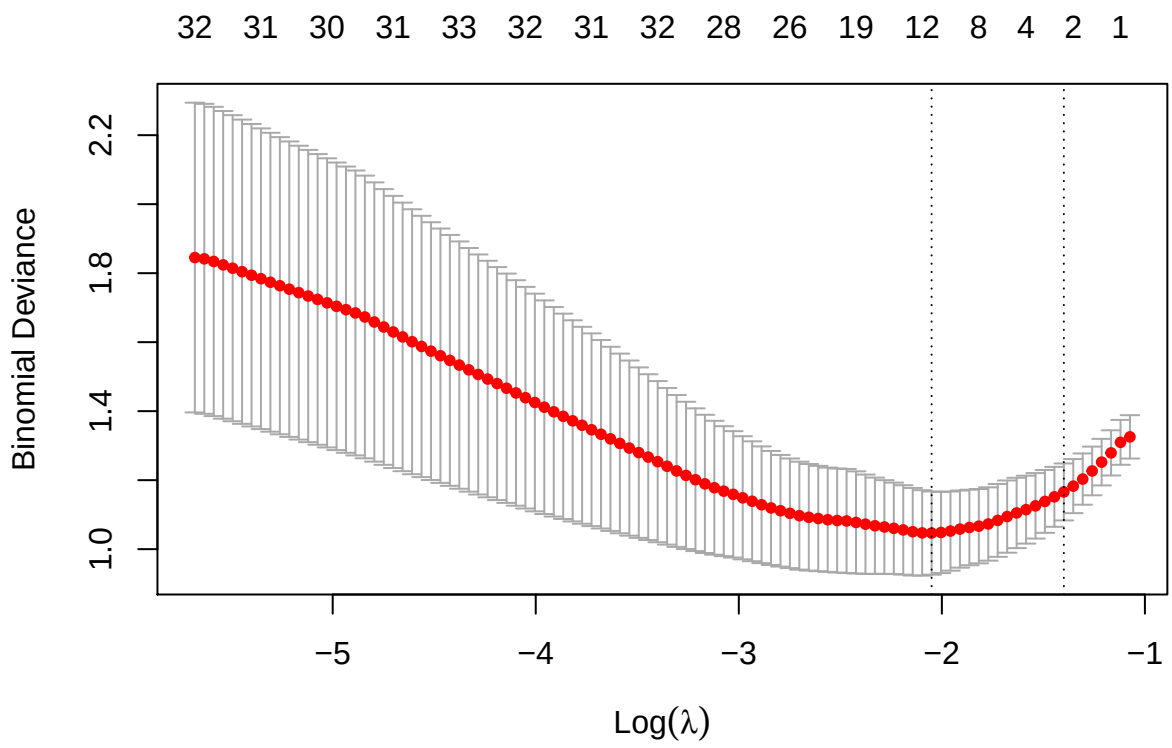
```
## Loading required package: Matrix
```

```
## Loaded glmnet 4.0-2
```

```
X_train=model.matrix(remission~.,data_train)[,-1]
Y_train=data_train$remission
X_te=model.matrix(remission~.,data_test)[,-1]
Y_te=data_test$remission
```

Different way to run lasso but doesn't seem to run accurately both error is 0

```
set.seed(123)
cv.lasso <- cv.glmnet(X_train, Y_train, alpha = 1, family = "binomial")
plot(cv.lasso)
```




```
cv.lasso$lambda.min
```

```
## [1] 0.1286703
```

```
cv.lasso$lambda.1se
```

```
## [1] 0.2467781
```

```
#coef(cv.lasso, cv.lasso$lambda.min)
```

```
#Using lambda.min
model <- glmnet(X_train, Y_train, alpha = 1, family = "binomial",lambda = cv.lasso$lambda.min)
# regression coefficients
coeffs<-coef(model)
coeffs<-as.data.frame(as.matrix(coeffs))
coeford<-coeffs[order(-coeffs$s0), , drop = FALSE]
row_sub = apply(coeford, 1, function(row) all(row !=0 ))
coef0<-coeford[row_sub,, drop = FALSE]
```

```
View(coef0)
data.frame(coef0)
```

```
##                                       s0
## QUICKI_12                    3.175564e+00
## gmihba1_12                   4.664018e-01
## HDL_12                       4.074800e-01
## IWQOL_EsteemAVG_12           1.668712e-01
## dneck120                     6.668647e-02
## percent_time_70_180_12       2.166279e-03
## UricAcid_12                  1.718520e-03
## percent_time_70_180_night_12 1.751711e-04
## IWQOL_EsteemScale_12         1.219488e-04
## DMedLast                    -1.987887e-16
## diabmedl                    -1.104585e-04
## Diabetesmedno_LAST          -1.491953e-04
## Diabetesmedno_12            -9.002303e-02
## Diabetesmedno_6             -2.259538e-01
## (Intercept)                 -1.257286e+00
```

```
probabilities <- model %>% predict(newx = X_te)
predicted.classes <- ifelse(probabilities > 0.5, "pos", "neg")
# Model accuracy
observed.classes <- data_test$remission
mean(predicted.classes == observed.classes)
```

```
## [1] 0
```

```
#Using lambda.1se
model1 <- glmnet(X_train, Y_train, alpha = 1, family = "binomial",lambda = cv.lasso$lambda.1se)
# regression coefficients
coeffs1<-coef(model1)
coeffs1<-as.data.frame(as.matrix(coeffs1))
coeford1<-coeffs1[order(-coeffs1$s0), , drop = FALSE]
row_sub = apply(coeford1, 1, function(row) all(row !=0 ))
coef1<-coeford1[row_sub,, drop = FALSE]
View(coef1)
data.frame(coef1)
```

```
##                        s0
## QUICKI_12    2.9742686387
## UricAcid_12  0.0008080566
## (Intercept) -0.1900546703
```

```
probabilities <- model1 %>% predict(newx = X_te)
predicted.classes <- ifelse(probabilities > 0.5, "pos", "neg")
observed.classes <- data_test$remission
mean(predicted.classes == observed.classes)
```

```
## [1] 0
```

Random forest

```
library(randomForest)
```

```
## randomForest 4.6-14
```

```
## Type rfNews() to see new features/changes/bug fixes.
##
## Attaching package: 'randomForest'
## The following object is masked from 'package:dplyr':
##
##     combine
```

```
data$remission <- as.character(data$remission)
data$remission <- as.factor(data$remission)
fit <- randomForest(remission~., data)
print(fit)
```

```
##
## Call:
##  randomForest(formula = remission ~ ., data = data)
##                Type of random forest: classification
##                      Number of trees: 500
## No. of variables tried at each split: 107
##
##         OOB estimate of  error rate: 14.29%
## Confusion matrix:
##    0  1 class.error
## 0 18  9  0.33333333
## 1  1 42  0.02325581
```

```
imp<-importance(fit)
rfimp<-data.frame(imp)
rfimp<- rfimp[order(-rfimp$MeanDecreaseGini), , drop = FALSE]
row_sub = apply(rfimp, 1, function(row) all(row !=0 ))
rfimp<-rfimp[row_sub,, drop = FALSE]
View(rfimp)
data.frame(rfimp)
```

```
##                                MeanDecreaseGini
## Creatinine_12                        0.3018207939
## percent_time_70_180_night_12         0.2818320882
## VitD_12                              0.2335704282
## WTLOSS_12                            0.2314719945
## EosinophilAuto_12                    0.2234741106
## Cholesterol_12                       0.2117557885
## AST_12                               0.2093061419
## FT4_12                               0.2092592301
## EQ5D_Anxiety_12                      0.2060071552
## BilirubinT_12                        0.2018839493
## lvitD_12                             0.2010481385
## VitB12_12                            0.1976154042
## BEN                                  0.1974306408
## Fibro_E_med_12                       0.1952207643
## lAST_12                              0.1939994293
## FBG_12                               0.1870033905
## wtloss_0_12                          0.1841749096
## Urea_12                              0.1727274357
## ALT_12                               0.1677857588
## dwaist120                            0.1617295342
```

```
## Fibro_E_IQRE_med_12                0.1603504865
## lPTH_12                            0.1589444015
## lCPeptide_12                       0.1542560538
## SBP_Standing_1_12                  0.1516111986
## ADP                                0.1485126245
## X_12                               0.1469666962
## Ferritin_12                        0.1435804901
## Potassium_12                       0.1403109753
## Chloride_12                        0.1381084791
## IWQOL_Esteem5_12                   0.1369773346
## Folate_12                          0.1364975646
## d_weight_120                       0.1271648859
## EQ5D_Scale_12                      0.1252458637
## Calcium_12                         0.1205832342
## EQ5D_Pain_12                       0.1155423981
## BasophilAuto_12                    0.1150628197
## TotalProtein_12                    0.1124386948
## dfatmass120                        0.1118960277
## IWQOL_TotalAVG_12                  0.1086268208
## Waistcircumference_12              0.1083731712
## hbaf                               0.1063066437
## CalciumCorr_12                     0.1046559788
## lbgi_12                            0.1040617864
## HDL_12                             0.1033667269
## IWQOL_TotalScale_12                0.1033486508
## HR_Sitting_1_12                    0.1031565501
## Axis3CPM_12                        0.1018687775
## q1_sensor_12                       0.1004834473
## Axis2AverageCounts_12              0.1003668682
## TANITABMR_12                       0.0996092057
## Light_12                           0.0991982705
## VectorMagnitudeMaxCounts_12        0.0985374739
## EQ5D_Mobility_12                   0.0980589831
## IWQOL_PhysicalScaleAdj_12          0.0967223583
## AUC                                0.0961401521
## Glucose_12                         0.0939463285
## VectorMagnitudeCPM_12              0.0936117549
## lALT_12                            0.0907260361
## excursions_over_120_12             0.0893692919
## IWQOL_WorkCount_12                 0.0889268707
## CRP_12                             0.0876618314
## HR_Standing_1_12                   0.0867921789
## lferritin_12                       0.0860142534
## IWQOL_Physical2_12                 0.0859432252
## GGT_12                             0.0854679164
## AVR                                0.0851180046
## TANITAIdealBodyWeight_12           0.0832663946
## DQ5D_Selfcare_12                   0.0827744631
## EQ5D_Activities_12                 0.0826829932
## IWQOL_WorkScaleAdj_12              0.0826776335
## Chloride_6                         0.0813876418
## inMVPA_12                          0.0807976463
## AUI                                0.0800263719
## lHDL_9                             0.0799232912
```

```
## StepsAverageCounts_12              0.0798455988
## standard_deviation_12              0.0796192326
## IWQOL_Physical1_12                 0.0790526984
## DBP_Standing_1_12                  0.0779970295
## l2IL17BR_3                         0.0761133108
## TANITAVisceralFatRating_12         0.0757634721
## AUD                                0.0751359742
## QUICKI_6                           0.0742108352
## DBP_Standing_2_12                  0.0741251729
## TANITAWeight_12                    0.0738550073
## SBP_Sitting_1_12                   0.0711561077
## IPAQ_Sitting_12                    0.0706340647
## Axis3MaxCounts_12                  0.0704839601
## inLight_12                         0.0703143597
## TANITABoneMass_12                  0.0698880797
## IL17E_3                            0.0682377932
## lIPAQ_TotalMETs_12                 0.0666000590
## lInsulin_6                         0.0665020106
## q3_sensor_12                       0.0664460583
## hbgi_12                            0.0659053638
## MPV_12                             0.0648478114
## Calorimetry_RMR_12                 0.0645130532
## insulinpmol_9                      0.0642840336
## OO                                 0.0634781454
## Axis1AverageCounts_12              0.0632092707
## Neckcircumference_12               0.0629946863
## l2IL34_3                           0.0628368858
## percent_time_over_180_0            0.0624424007
## ADS                                0.0607815518
## ADJ                                0.0607373139
## percent_time_70_180_12             0.0603688312
## IWQOL_Esteem2_12                   0.0598095056
## HR_Standing_2_12                   0.0595962240
## ALT_3                              0.0592681341
## l2Galectin4_3                      0.0592204329
## num_days_good_data_12              0.0587714286
## TotalSedentaryBouts_12             0.0586893895
## LDLCalc_12                         0.0586298962
## TANITAMuscleMass_12                0.0583776002
## Triglyceride_12                    0.0576417151
## Albumin_12                         0.0576161838
## Moderate_12                        0.0568924959
## IWQOL_EsteemAVG_12                 0.0567351145
## UMALBRatio_12                      0.0555085714
## Glucose_6                          0.0552458694
## IWQOL_TotalCount_12                0.0546031746
## MCV_12                             0.0543182885
## LuxAverageCounts_12                0.0538657580
## total_auc_12                       0.0537841125
## TANITAFFM_12                       0.0535599845
## Insulin_12                         0.0530357143
## l2RANK_3                           0.0528557626
## Platelet_12                        0.0528228571
## HR_Standing_Avg_12                 0.0525417136
```

```
## SBP_Standing_Avg_12                0.0515945962
## PKCZ_3                             0.0495918367
## HR_Sitting_3_12                    0.0495827177
## Hct_12                             0.0494444232
## IWQOL_Work4_12                     0.0492255848
## median_sensor_12                   0.0483246201
## Axis1CPM_12                        0.0479846528
## day_night_sensor_ratio_12          0.0474575407
## UricAcid_12                        0.0472628571
## DBP_Sitting_Avg_12                 0.0470263305
## AUN                                0.0469070437
## TANITAFatMass_9                    0.0467972476
## BQC                                0.0460178149
## IWQOL_Physical8_12                 0.0459784698
## HR_Standing_1_0                    0.0455754667
## HCE003300_3                        0.0455736264
## l2phosphoglyceratekinase1_6        0.0449241137
## VitD_9                             0.0448193939
## IPAQ_6_Trun_12                     0.0446444298
## MCHC_12                            0.0445823129
## l2NovH_3                           0.0445333333
## l2DPL                              0.0445122877
## l2ARTS1_3                          0.0442514286
## SBP_Sitting_3_12                   0.0442405046
## IWQOL_Esteem7_12                   0.0439314286
## Urea_9                             0.0438608220
## IPAQ_TotalMETs_12                  0.0435590216
## lcrp_9                             0.0435590216
## IWQOL_EsteemCount_12               0.0434603175
## nighttime_sd_12                    0.0434194888
## SBP_Sitting_2_12                   0.0432565940
## l2Trypsin2_3                       0.0432000000
## LymphocyteAuto_12                  0.0431092437
## SMOC1_3                            0.0431092437
## QUICKI_12                          0.0431092437
## ROBO3_3                            0.0430951012
## Fibro_E_IQR_12                     0.0425671075
## Sodium_9                           0.0424779388
## j_index_12                         0.0422323308
## MonocyteAuto_12                    0.0420943915
## l2KLRF1_6                          0.0420761905
## IWQOL_DistressCount_12             0.0420622222
## gmi_12                             0.0417794585
## l2NANOG_3                          0.0417794585
## DCSIGN_3                           0.0414398681
## HDL_9                              0.0414268908
## TotalSedentaryBreaks_12            0.0414228571
## daytime_sd_0                       0.0413731302
## lcrp_12                            0.0413063335
## min_spent_over_180_12              0.0411957465
## TANITABMI_9                        0.0411463203
## QUICKI_3                           0.0408149068
## DBP_Standing_1_9                   0.0407403029
## nighttime_avg_sens_glucose_12      0.0406352403
```

```
## HR_Standing_1_LAST                0.0405313668
## RDWCV_12                          0.0402336508
## HDL_0                             0.0396439394
## kcals_12                          0.0394909430
## l2EF1beta_3                       0.0394651515
## l2sTie1_3                         0.0388065542
## OSM_6                             0.0387292208
## UricAcid_6                        0.0387108590
## l2LIN7B_6                         0.0385714286
## Fibro_CAP_IQR_12                  0.0384881563
## LAG3_3                            0.0382015996
## GITR_3                            0.0381921501
## LDLCalc_9                         0.0381197700
## percent_time_over_140_12          0.0376414754
## Waistcircumference_6              0.0375669841
## EPOR_6                            0.0375669841
## IWQOL_WorkScale_12                0.0374857143
## NANOG_3                           0.0374010582
## lIPAQ_TotalMETs_Trun_12           0.0372173495
## UCreatinine_9                     0.0371314286
## Fibro_E_IQRE_med_6                0.0371159030
## ERBB4_3                           0.0368970072
## IGFI_3                            0.0368703934
## inSedentary_12                    0.0368556064
## percent_time_70_180_day_12        0.0367714286
## C1r_6                             0.0367682382
## KREM2_3                           0.0366149660
## lAST_3                            0.0364850959
## min_sensor_12                     0.0361869313
## IWQOL_Physical7_12                0.0359863946
## l2LEG9_3                          0.0359863946
## DBP_Standing_Avg_9                0.0358914233
## ARY                               0.0358400000
## CPeptide_6                        0.0356835979
## UMicroalb_12                      0.0355032468
## l2PTHrP_0                         0.0354470978
## IL1R4_6                           0.0352149946
## IL8_3                             0.0351673469
## GGT_9                             0.0351620771
## Height_12                         0.0348923077
## IWQOL_Esteem1_12                  0.0348923077
## Insulin_9                         0.0348048060
## RD                                0.0347657143
## HR_Sitting_Avg_0                  0.0346599895
## total_sensor_readings_12          0.0342857143
## IWQOL_Physical3_12                0.0341702656
## NogoReceptor_6                    0.0341536508
## l2OPG_3                           0.0338800000
## l2CLC4K_3                         0.0338800000
## StepsPerMinute_3                  0.0336620647
## MDRD4_12                          0.0336561404
## MDRD4_9                           0.0336119658
## RBC_12                            0.0336008658
## IWQOL_DistressScaleAdj_12         0.0334955423
```

```
## wtloss_0_9                          0.0332921325
## l2MAPK5_6                           0.0332893475
## MBL_12                              0.0332247619
## Averagekcalsperday_12               0.0331523810
## average_auc_per_day_12              0.0329456243
## SBP_Standing_1_6                    0.0329063246
## IWQOL_Distress1_12                  0.0329063246
## BilirubinT_9                        0.0327788360
## HR_Sitting_Avg_3                    0.0327690378
## VectorMagnitudeMaxCounts_3          0.0326859023
## l2PH_3                              0.0325814536
## l2PHI_6                             0.0325520534
## IWQOL_EsteemScale_12                0.0324521893
## Albumin_9                           0.0322432140
## HR_Sitting_2_12                     0.0321511971
## Endocan_3                           0.0320380952
## modd_12                             0.0317698853
## nighttime_min_sens_glucose_12       0.0316749917
## Potassium_3                         0.0316483516
## TSH_12                              0.0315584416
## COMPLETED12M                        0.0315584416
## CathepsinS_6                        0.0314903097
## l2Eotaxin2_3                        0.0314201299
## HR_Sitting_2_0                      0.0313848767
## l2GREM1_6                           0.0313003175
## max_sensor_0                        0.0312169082
## TANITAFatMass_12                    0.0311537415
## PDE7A_3                             0.0311537415
## CD47_3                              0.0311074197
## l2SIG14_3                           0.0309892587
## l2FABP_3                            0.0309428571
## diabmedl                            0.0307318478
## HIV2Rev_3                           0.0306884058
## HR_Standing_1_9                     0.0306342160
## ERBB2_3                             0.0305873196
## TANITABMI_12                        0.0304295482
## Angiotensinogen_3                   0.0302482116
## IWQOL_Physical4_12                  0.0302120259
## HPG_3                               0.0302120259
## JAG1_0                              0.0302109091
## AlkPhos_9                           0.0301474274
## l2ERBB1_3                           0.0300787213
## l2EDA_3                             0.0298666667
## MRCKB_0                             0.0296817453
## CKDEPI_9                            0.0296435795
## Calcium_9                           0.0296228571
## efficeincy                          0.0295140147
## KIRR3_0                             0.0294617792
## l2ILT2_6                            0.0294617383
## l2EPOR_6                            0.0293486471
## DBP_Sitting_3_12                    0.0293261456
## l2kallikrein5_0                     0.0293125541
## DBP_Sitting_2_9                     0.0292640693
## NumberofEpochs_3                    0.0292163338
```

```
## TANITAMuscleMass_9                  0.0291432974
## l2SDF1_6                            0.0290303433
## IWQOL_WorkAVG_12                    0.0289821468
## modd_0                              0.0289725927
## IL1RAcP_3                           0.0289598344
## l2HCE000342_0                       0.0288688172
## wtloss3_0                           0.0286754460
## nighttime_max_sens_glucose_12       0.0285714286
## IgA_0                               0.0284731485
## Fibro_E_IQR_3                       0.0284424832
## Axis2MaxCounts_12                   0.0283942857
## l2FGF9_3                            0.0283102041
## BSP_0                               0.0281955556
## IL17RC_3                            0.0280941210
## min_spent_over_200_night_0          0.0280472050
## IWQOL_TotalScaleAdj_12              0.0278146032
## pc5                                 0.0277679726
## cv_12                               0.0277341615
## IL17D_3                             0.0276468272
## DPK                                 0.0275427937
## DHH_3                               0.0275093027
## l2H6ST1_3                           0.0275093027
## l2ENA78_3                           0.0274293233
## IL17B_0                             0.0273147845
## min_spent_over_250_day_0            0.0272605301
## MaxTimeperFreedson1998Bou           0.0269968969
## Axis1CPM_0                          0.0268585659
## ApoB_3                              0.0265863169
## OSM_3                               0.0265722743
## l2PIK3CAPIK3R1_6                    0.0264727273
## l2RNaseH1_12                        0.0264208683
## RDWCV_3                             0.0264142857
## MCH_9                               0.0261120879
## Trypsin2_0                          0.0260980392
## min_spent_70_180_12                 0.0260923550
## FGF8A_6                             0.0259453416
## min_spent_over_140_12               0.0258705549
## IWQOL_Physical10_12                 0.0256530021
## auc_over_180_0                      0.0254417701
## gmihba1_12                          0.0254021978
## C3b_6                               0.0252457143
## l2CD177_3                           0.0252457143
## l2MATN2_0                           0.0251101466
## l2ZAP70_3                           0.0250914729
## WTLOSS_12_LAST                      0.0250381618
## l2RSPO4_12                          0.0248579019
## l2FactorH_6                         0.0248083857
## Time_12                             0.0247714286
## CD27_0                              0.0245805036
## EMAP2_0                             0.0244577589
## l2tPA_0                             0.0243599331
## lALT_9                              0.0240790801
## average_sensor_0                    0.0240593381
## lPTH_6                              0.0236680933
```

```
## l2pTEN_3                          0.0234782609
## wtloss_0_3                        0.0233232175
## l2TACI_6                          0.0232133256
## l2Grobg_6                         0.0231580827
## min_spent_over_180_night_0        0.0231092200
## HIV2Rev_0                         0.0230658979
## SIRT2_0                           0.0229340294
## d_weight_30                       0.0228299657
## l2Alphaenolase_3                  0.0227781936
## DMedLast                          0.0227396428
## C8_0                              0.0227045455
## TroponinIskeletalfasttwitc        0.0225894599
## l2a2Antiplasmin_0                 0.0225408163
## TGFb1_6                           0.0223940788
## l2FactorH_12                      0.0222244462
## Time_3                            0.0220835350
## Rb_6                              0.0220020274
## FT4_9                             0.0218272464
## l2CHST6_3                         0.0217666667
## MIA_0                             0.0215485788
## EPHA3_0                           0.0215238095
## JAML1_0                           0.0214308943
## JAG1_3                            0.0213794967
## Ckine_0                           0.0213747262
## Axis2Counts_12                    0.0213186207
## cMyc_0                            0.0211314286
## l2ADAM9_6                         0.0211038961
## TANITATBW_6                       0.0210380952
## NOTC2_12                          0.0210173737
## NKp30_0                           0.0210168961
## standard_deviation_0              0.0208814192
## Averagekcalsperhour_12            0.0206741201
## HR_Sitting_3_3                    0.0206398349
## SDF1_6                            0.0205714286
## HR_Sitting_3_LAST                 0.0205512746
## C2_3                              0.0205157943
## l2IL1RAcP_6                       0.0204861776
## Rb_0                              0.0203636364
## l2BMP7_0                          0.0202365950
## daytime_auc_12                    0.0201504125
## MMP7_3                            0.0199980471
## l2DCSIGN_0                        0.0199584576
## l2SEPR_3                          0.0198522098
## MSPR_0                            0.0197776520
## l2cGMPstimulatedPDE_6             0.0197676190
## GFRa3_0                           0.0195222433
## AREG_0                            0.0194400020
## dmusclemass120                    0.0194181145
## MCH_0                             0.0193050712
## Properdin_6                       0.0192000000
## kallikrein8_12                    0.0190939405
## l2IL8_3                           0.0190924959
## inMVPA_6                          0.0190855731
## l2a1Antitrypsin_0                 0.0190400458
```

```
## TECK_0                          0.0190272364
## l2MFGM_12                       0.0189943666
## nighttime_sd_0                  0.0189729576
## MMP2_12                         0.0189342857
## average_auc_per_day_0           0.0188833183
## inMVPA_0                        0.0188558935
## l2TroponinT_6                   0.0188053391
## l2IL5Ra_12                      0.0187500000
## lALT_3                          0.0185818566
## l2IL1F7_0                       0.0185444444
## l2Aggrecan_0                    0.0184666167
## Averagekcalsperday_3            0.0182430155
## l2IMB1_12                       0.0182400000
## percent_time_over_250_0         0.0182237563
## l2Semaphorin6A_12               0.0182101122
## LivinB_0                        0.0182052632
## PDK1_0                          0.0182052632
## LDLR_3                          0.0182050622
## l2PAFAH_3                       0.0181313040
## l2NID2_0                        0.0180846561
## HCE000342_3                     0.0180333952
## HR_Standing_1_screening         0.0180236912
## l2SCGFbeta_0                    0.0180107143
## Diabetesmedno_12                0.0179658653
## l2SET_12                        0.0179356061
## l2CSK21_0                       0.0179259259
## l2sLeptinR_6                    0.0179029443
## SPTA2_6                         0.0178775744
## PESC_6                          0.0178598550
## SLIK1_12                        0.0178571429
## MIP5_0                          0.0178503775
## l2ghrelin_12                    0.0177777778
## CathepsinH_0                    0.0177509549
## LGMN_0                          0.0177141674
## RDWCV_0                         0.0176989967
## l2PSP_0                         0.0176075650
## Triglyceride_3                  0.0175837321
## Diabetesmedno_LAST              0.0175192858
## l2FTCD_3                        0.0175157895
## l2PSP_6                         0.0175108616
## Sulphonylurea_0                 0.0175075988
## l2LRP8_3                        0.0174743187
## MDC_0                           0.0174618182
## FGF23_6                         0.0174545455
## CONA1_3                         0.0174409938
## sqrtghrelin_0                   0.0174180165
## lHDL_12                         0.0173779904
## l2GFAP_12                       0.0173051338
## l2Testican1_3                   0.0173008625
## l2ERBB2_6                       0.0172972973
## estimated_a1c_12                0.0172902963
## l2DLC8_0                        0.0172386364
## QUICKI_9                        0.0172023810
## l2IL17F_0                       0.0171521336
```

```
## l2RASA1_3                          0.0170242424
## PTP1C_3                            0.0170103704
## l2TF_6                             0.0170086682
## l2BAFF_0                           0.0169928094
## l2HistoneH12_0                     0.0169477241
## l2EGVEGF_12                        0.0169312169
## Coactosinlikeprotein_6             0.0167491639
## l2CathepsinD_6                     0.0166600000
## AMPKa1b1g1_0                       0.0165282555
## RAN_0                              0.0164705882
## PESC_0                             0.0164660482
## l2GCSF_6                           0.0164660482
## l2CathepsinG_0                     0.0164285714
## ApoB_0                             0.0164131231
## l2MK13_12                          0.0164131231
## SAA_6                              0.0164045336
## min_spent_over_200_0               0.0163878788
## OSM_0                              0.0162976190
## l2EDA_0                            0.0162331081
## l2Chk2_6                           0.0161910015
## ALT_9                              0.0161538462
## l2IFNlambda2_6                     0.0161333333
## KI3S1_6                            0.0161293743
## dm_12                              0.0160654545
## TCPTP_3                            0.0160535117
## Artemin_0                          0.0160190476
## GFRa3_6                            0.0159939531
## l2VEGFsR3_0                        0.0159131227
## SRCN1_3                            0.0158865248
## l2proteinZinhibitor_0              0.0158431533
## PAK6_6                             0.0158333333
## ICOS_3                             0.0158235216
## l2FGR_0                            0.0158142857
## daytime_max_sensor_glucose_12      0.0156847059
## l2CDK2cyclinA_12                   0.0156829837
## HR_Sitting_3_0                     0.0156800000
## PTN_0                              0.0156755094
## l2EMAP2_6                          0.0156346552
## l2a1Antitrypsin_6                  0.0156001535
## KI3S1_0                            0.0155936920
## TANITAMetabolicAge_3               0.0155370844
## l2HCE000342_3                      0.0155038760
## l2TGFb1_3                          0.0154103343
## l2PLXB2_12                         0.0153890909
## p53_3                              0.0153861237
## l2ETU                              0.0153409091
## l2EPHA3_0                          0.0153391304
## trighdl_0                          0.0153373860
## l2Lactoferrin_6                    0.0153035923
## min_spent_over_180_night_12        0.0151856792
## l2EGVEGF_0                         0.0151439259
## Hgb_12                             0.0151250000
## av_awakening                       0.0151173913
## l2CCL28_6                          0.0150383632
```

```
## Neurotrophin3_0                    0.0150146628
## r_mage_0                           0.0150017160
## Stanniocalcin1_3                   0.0149422222
## IFNlambda2_0                       0.0149345455
## l2Midkine_3                        0.0149333333
## l2AMPKa1b1g1_6                     0.0149286379
## OAS1_0                             0.0149055331
## TIG2_0                             0.0148695652
## l2sRANKL_0                         0.0147917834
## PDE5A_0                            0.0147393939
## IMDH1_0                            0.0147272727
## l2Leptin_6                         0.0147272727
## l2GPDA_0                           0.0147200000
## l2IL17RC_3                         0.0146994774
## IF4A3_0                            0.0146938776
## aldolaseA_3                        0.0146938776
## SBP_Sitting_1_6                    0.0146866930
## HR_Sitting_Avg_12                  0.0146403181
## l2HGH_12                           0.0146352543
## percent_time_over_250_12           0.0146086957
## l2GX_3                             0.0145833333
## l2ITIheavychainH4_3                0.0145832831
## a1Antitrypsin_6                    0.0145777778
## HCG_6                              0.0145714286
## StepsMaxCounts_3                   0.0145185185
## l2EMAP2_0                          0.0144420493
## AurorakinaseA_12                   0.0144390244
## l2TGFb1_6                          0.0144000000
## l2HSP70protein8_3                  0.0143013431
## SPD_0                              0.0142857143
## Notch3_0                           0.0142281481
## HR_Sitting_1_LAST                  0.0142145079
## l2FGF17_3                          0.0141949897
## inModerate_12                      0.0141842105
## IWQOL_TotalScale_0                 0.0141493268
## l2ERK1_3                           0.0141243221
## HR_Sitting_1_3                     0.0140833333
## l2PIK3CAPIK3R1_3                   0.0140586953
## KI3S1_3                            0.0140489510
## IL2sRa_0                           0.0140455006
## l2ING1_0                           0.0139808407
## l2SNP25_6                          0.0139758125
## SIG14_3                            0.0139706239
## Trypsin_0                          0.0139653637
## SBP_Sitting_2_6                    0.0139069767
## l2JAG2_3                           0.0138888889
## Gelsolin_12                        0.0138857143
## ERBB2_6                            0.0138775758
## carbonicanhydraseII_6              0.0138753388
## lIPAQ_ModerateMETs_Trun_12         0.0137931034
## Rb_3                               0.0137619048
## Axis1AverageCounts_0               0.0137500000
## l2SMAD3_3                          0.0137142857
## l2HCC1_3                           0.0137142857
```

```
## HCC4_0                              0.0136955437
## HeparincofactorII_3                 0.0136898396
## SBP_Standing_2_6                    0.0136699201
## bFGF_6                              0.0136606061
## l2FactorB_6                         0.0136567742
## TNR4_6                              0.0136373027
## MDC_6                               0.0136296296
## l2NXPH1_3                           0.0136111111
## GPNMB_0                             0.0135417957
## l2C9_12                             0.0135384615
## Glucose_9                           0.0134678261
## SPTA2_3                             0.0134555256
## Fasligandsoluble_3                  0.0134446297
## l2DSC2_3                            0.0134400000
## l2ALCAM_3                           0.0134400000
## RSPO4_6                             0.0134167800
## l2IgG_0                             0.0134095238
## WBC_12                              0.0133928105
## estimated_a1c_0                     0.0133636364
## l2BQC                               0.0133472222
## l2FCAR_6                            0.0133472222
## l2NSF1C_0                           0.0133333333
## l2Ficolin3_3                        0.0133333333
## CD97_0                              0.0133082632
## Properdin_0                         0.0133082632
## l2CD30_0                            0.0133070770
## Fibro_CAP_med_3                     0.0132860412
## HSP90ab_0                           0.0132687573
## hnRNPA2B1_0                         0.0132600423
## l2Cardiotrophin1_0                  0.0132432432
## CoagulationFactorVII_0              0.0132173913
## l2PDE5A_3                           0.0132173913
## lHDL_0                              0.0132071429
## TRAILR1_3                           0.0131076280
## l2SHPS1_6                           0.0131050642
## GIB_0                               0.0130909091
## lInsulin_0                          0.0130909091
## EF1beta_3                           0.0130903704
## CEBPB_0                             0.0130614192
## d_hr120                             0.0129457143
## l2HXK1_0                            0.0129230769
## l2GMCSF_12                          0.0129228202
## ADR                                 0.0128571429
## l2Soggy1_0                          0.0128205128
## MMP13_3                             0.0128000000
## gmihba1_0                           0.0127837995
## SSRP1_0                             0.0127213675
## ARMEL_0                             0.0126984127
## CD63_0                              0.0126820663
## lAST_0                              0.0126724138
## lnghrelin_0                         0.0126512472
## inMVPA_3                            0.0126024354
## percent_time_over_180_night_12      0.0125874126
## l2IL18BPa_0                         0.0125874126
```

```
## IL17BR_6                          0.0125108225
## l2FractalkineCX3CL1_0             0.0124901961
## IL1RAcP_0                         0.0124842681
## RASA1_3                           0.0124759338
## l2IgD_6                           0.0124759338
## l2B7H1_12                         0.0124759338
## l2TMA_0                           0.0124470588
## FGF12_0                           0.0123649374
## l2IGFBP3_0                        0.0123420943
## l2CoagulationFactorV_6            0.0123356643
## lALT_0                            0.0123076923
## l2LRRK2_0                         0.0122807018
## l2IL12Rb1_6                       0.0122793862
## l2KI3S1_6                         0.0122793862
## IPAQ_3_12                         0.0122500000
## l2MBL_0                           0.0122469400
## percent_time_over_200_0           0.0122181818
## WNK3_3                            0.0121977324
## l2WISP3_12                        0.0121904762
## Cadherin6_6                       0.0121580547
## HDL_3                             0.0121333333
## min_spent_over_180_0              0.0121008403
## HR_Standing_Avg_9                 0.0120415636
## percent_time_over_200_day_12      0.0120415636
## l2STAT1_0                         0.0120415636
## l2ThrombopoietinReceptor_0        0.0120029304
## MCV_0                             0.0120000000
## TNR4_0                            0.0120000000
## l2Alphaenolase_0                  0.0119787721
## BilirubinT_3                      0.0119313501
## l2CYTT_0                          0.0119276088
## DGE                               0.0119233263
## average_sensor_12                 0.0118714286
## l2TSP4_0                          0.0118513324
## HR_Standing_2_LAST                0.0118183832
## LRRK2_0                           0.0117729730
## l2ADAMTS5_6                       0.0117595242
## C2_0                              0.0117333333
## HCE003300_0                       0.0116744828
## C9_6                              0.0116744828
## TANITABMI_screening               0.0116666667
## SPARCL1_6                         0.0116666667
## OPG_3                             0.0116597403
## Secretin_3                        0.0116528327
## l2Rb_3                            0.0116452348
## resistin_12                       0.0116412121
## l2RAP_0                           0.0116065268
## percent_time_over_180_day_0       0.0115720882
## NXPH1_6                           0.0115444444
## PHI_3                             0.0115419274
## l2RXFP1_3                         0.0115238095
## l2HCE003167_0                     0.0115227273
## TACI_6                            0.0115130435
## Diabetesmedno_6                   0.0115047619
```

```
## l2HCE003183_0                0.0114612245
## l2IL8_0                      0.0114461318
## H6ST1_3                      0.0114421769
## l2ULBP1_6                    0.0114086957
## lHDL_3                       0.0113777778
## annexinII_12                 0.0113623188
## Renin_0                      0.0113613445
## PSD7_0                       0.0113454545
## l2paraoxonase1_0             0.0113262411
## l2IL7_6                      0.0112800000
## HSP60_0                      0.0112669246
## MO2R1_12                     0.0112653061
## Renin_3                      0.0112500000
## l2CD38_0                     0.0112421379
## HR_Sitting_1_6               0.0112340426
## l2PDPK1_3                    0.0112340426
## l2EPI_3                      0.0112213439
## CPeptide_3                   0.0112107023
## LRRK2_3                      0.0112000000
## SLPI_0                       0.0111909774
## RDWCV_6                      0.0111888112
## DLC8_0                       0.0111803517
## IPAQ_7_12                    0.0111607143
## l2WFKN2_3                    0.0111494800
## FABPE_3                      0.0111452991
## l2TECK_6                     0.0111111111
## Moesin_3                     0.0110769231
## IFNA7_0                      0.0110769231
## l2ARI3A_6                    0.0110769231
## HR_Sitting_2_LAST            0.0110555556
## CNTFRalpha_0                 0.0110526316
## l2PSA2_3                     0.0110526316
## l2sTie1_0                    0.0109965409
## l2CATE_6                     0.0109742441
## l2CDK1cyclinB_0              0.0109714286
## l2Lipocalin2_3               0.0109429280
## CTD                          0.0109176471
## l2TopoisomeraseI_0           0.0109090909
## l2ProteinC_0                 0.0109090909
## l2eIF5_3                     0.0108916996
## l2IL1RAcP_0                  0.0108724528
## CLF1CLCComplex_0             0.0108720391
## IL17F_0                      0.0108508634
## GA7331protein_3              0.0108374384
## l2PTHrP_3                    0.0108284314
## l2IL13Ra1_0                  0.0108248366
## median_sensor_0              0.0108160535
## GranzymeB_0                  0.0108051064
## l2HXK2_0                     0.0108000000
## SBP_Sitting_1_LAST           0.0107922078
## CHIP_3                       0.0107808341
## l2HPG_3                      0.0107808341
## IP10_0                       0.0107680526
## q3_sensor_0                  0.0107675785
```

```
## l2ABL1_0                          0.0107606099
## l2HEMK2_6                         0.0107586207
## l2LRIG3_3                         0.0107571225
## l2EGVEGF_3                        0.0107555556
## l2NEUREGULIN1_6                   0.0107555556
## l2Rb_6                            0.0107292070
## l2PAK7_3                          0.0107236479
## l2IL17D_3                         0.0107236479
## l2MMP13_3                         0.0107017189
## l2HAO_12                          0.0107017189
## ProteinS_0                        0.0106844648
## FYN_3                             0.0106730159
## l2MDC_0                           0.0106730159
## TXD12_3                           0.0106666667
## l2S100A7_3                        0.0106666667
## ARGI1_3                           0.0106666667
## lCPeptide_3                       0.0106430155
## ERP29_3                           0.0106298368
## l2PCSK7_12                        0.0106298368
## l2MAPK2_0                         0.0106116279
## l2BMPER_3                         0.0106116279
## HR_Standing_2_screening           0.0105800000
## l2LCK_3                           0.0105787546
## l2IF4A3_6                         0.0105787546
## l2Kras_3                          0.0105769231
## CONA1_0                           0.0105392157
## TroponinI_0                       0.0105155015
## l2sLeptinR_3                      0.0105142857
## l2OX40Ligand_0                    0.0105018182
## AlkPhos_12                        0.0105000000
## Endoglin_6                        0.0105000000
## BGN_12                            0.0105000000
## ENPP7_0                           0.0104700855
## l2FUT5_3                          0.0104347826
## l2I309_12                         0.0104347826
## l2PTN_0                           0.0104166667
## SH21A_12                          0.0104034537
## logghrelin_3                      0.0104034537
## l2DLL4_12                         0.0103879173
## l2Survivin_0                      0.0103787879
## l2HSP90b_3                        0.0103725490
## SBP_Standing_2_12                 0.0103636364
## C5_6                              0.0103636364
## l2VEGFD_12                        0.0103404255
## TANITAWeight_9                    0.0103384615
## Urea_0                            0.0103349282
## HR_Sitting_2_screening            0.0103242967
## ASG                               0.0102959002
## min_spent_over_120_12             0.0102722222
## AnnexinV_3                        0.0102722222
## l2RELT_6                          0.0102483660
## CalciumCorr_6                     0.0102248609
## l2GIIE_0                          0.0102248609
## StepsPerMinute_12                 0.0102099159
```

```
## GV_12                                0.0101939394
## DBP_Standing_2_screening             0.0101818182
## CarbonicanhydraseVII_0               0.0101818182
## BNP32_0                              0.0101818182
## Angiogenin_0                         0.0101818182
## HMGN1_3                              0.0101818182
## TANITAFFM_0                          0.0101696970
## GPNMB_3                              0.0101625784
## LRRT1_3                              0.0101587302
## l2SH21A_6                            0.0101587302
## MIC1_0                               0.0101512545
## l2AMPM2_6                            0.0101379310
## l2PCNA_6                             0.0101190476
## TAJ_3                                0.0101052632
## Averagekcalsperday_6                 0.0100783410
## l2Tenascin_0                         0.0100761905
## MOZ_0                                0.0100744186
## Siglec7_3                            0.0100744186
## l2Hemopexin_0                        0.0100744186
## l2Semaphorin3A_3                     0.0100609756
## LCMT1_12                             0.0100543590
## Noggin_0                             0.0100173913
## TANITAImpedance_12                   0.0100030189
## ASA                                  0.0100000000
## BMP7_0                               0.0100000000
## NET1_0                               0.0100000000
## FMQ                                  0.0100000000
## l2GIB_3                              0.0100000000
## C9_3                                 0.0100000000
## l2IL17RD_0                           0.0099469496
## l2LGMN_0                             0.0099468254
## lHDL_6                               0.0099375291
## UFM1_0                               0.0099324324
## MCP1_0                               0.0099202899
## Eotaxin_12                           0.0098859574
## l2TCPTP_0                            0.0098859574
## CathepsinD_6                         0.0098742857
## l2JAML1_3                            0.0098518868
## Prekallikrein_0                      0.0098000000
## l2AurorakinaseA_0                    0.0098000000
## Alphaenolase_3                       0.0097967267
## l2GPDA_6                             0.0097962963
## IgE_12                               0.0097500000
## l2cGMPstimulatedPDE_3                0.0097477616
## C3d_6                                0.0097123746
## l2Macrophagescavengerreceptor_6      0.0097123746
## l2calreticulin_6                     0.0097107843
## l2Carbonicanhydrase6_0               0.0097070707
## l2UCRP_3                             0.0097067745
## CSK21_3                              0.0096571429
## l2IL5Ra_6                            0.0096439486
## CathepsinA_6                         0.0096428571
## TANITAIdealBodyWeight_9              0.0096218182
## l2GFRa3_0                            0.0096181818
```

```
## l2FMQ                                0.0096000000
## RXFP1_0                              0.0096000000
## ActivinRIB_3                         0.0096000000
## l2IgE_0                              0.0096000000
## l2SE6L2_6                            0.0096000000
## HR_Sitting_2_6                       0.0095739018
## LRRK2_6                              0.0095238095
## Lactoferrin_0                        0.0094945055
## kallikrein13_6                       0.0094901961
## Sedentary_3                          0.0094877193
## Aggrecan_0                           0.0094417021
## CathepsinH_12                        0.0094417021
## cMyc_3                               0.0094285714
## LymphocyteAuto_0                     0.0094285714
## l2BCL6_12                            0.0094267241
## DBP_Sitting_1_0                      0.0094173913
## HR_Sitting_Avg_9                     0.0093913043
## l2LY86_3                             0.0093879341
## average_auc_180_0                    0.0093605442
## l2hnRNPAB_3                          0.0093605442
## DBP_Sitting_1_12                     0.0093388889
## CAMK1D_0                             0.0093388889
## AUQ                                  0.0093076923
## TANITATBW_3                          0.0093043478
## Corticotropinlipotropin_3            0.0092444444
## l2IGFIsR_0                           0.0092390977
## l2H31_6                              0.0091746032
## WBC_9                                0.0090685714
## SBP_Sitting_2_screening              0.0090000000
## CLC4K_0                              0.0090000000
## SCGFbeta_12                          0.0090000000
## l2TIMP1_3                            0.0089824561
## FGF17_0                              0.0089743590
## PAPPA_0                              0.0089629630
## TGFb3_0                              0.0088944444
## SribosomalproteinSA_3                0.0088888889
## CalcineurinBa_0                      0.0088888889
## l2NID2_3                             0.0088530006
## l2SAA_6                              0.0088494983
## l2EGF_6                              0.0088000000
## Ubiquitin_0                          0.0087702233
## l2carbonicanhydraseII_3              0.0087575758
## EGV                                  0.0087521368
## TANITAFatMass_6                      0.0087272727
## TotalSedentaryBreaks_6               0.0087272727
## PLK1_3                               0.0087272727
## l2HIV2Rev_3                          0.0087272727
## l2HeparincofactorII_3                0.0086666667
## l2FCG2B_0                            0.0086538462
## l2BCAM_0                             0.0085838298
## l2Discoidindomainreceptor2_0         0.0085815603
## l2CNTN2_3                            0.0085468115
## Cardiotrophin1_6                     0.0084992026
## IWQOL_Physical2_0                    0.0084521739
```

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## IPAQ_5_12                          0.0084000000
## FGF5_6                             0.0084000000
## l2MMP17_3                          0.0084000000
## l2PDGFBB_3                         0.0084000000
## l2GAPDHliver_6                     0.0084000000
## l2BoneproteoglycanII_6             0.0083527950
## l2SPARCL1_6                        0.0082971429
## LEG9_3                             0.0082800000
## ANGL3_0                            0.0082442118
## MMP1_0                             0.0082340426
## MDRD4_6                            0.0082173913
## l2Proteindisulfideisomerase_0      0.0081818182
## LRRT3_6                            0.0081699346
## TNFb_3                             0.0081428571
## l2PIANP_3                          0.0081428571
## Ficolin3_0                         0.0080357143
## TotalMeds_0                        0.0080000000
## Dtk_0                              0.0080000000
## CD30Ligand_3                       0.0080000000
## FAM3D_6                            0.0080000000
## XEDAR_6                            0.0080000000
## FactorH_6                          0.0080000000
## SNAA_12                            0.0080000000
## dipaqsittingtrunc120               0.0080000000
## l2Lactoferrin_3                    0.0080000000
## l2FCRL3_6                          0.0080000000
## SMAD2_0                            0.0079930808
## l2OCAD1_3                          0.0079714286
## l2PDXK_6                           0.0079411765
## Semaphorin3A_3                     0.0079090909
## CKBB_3                             0.0078769231
## IWQOL_Esteem6_12                   0.0078763636
## TLR4MD2complex_0                   0.0078525641
## EphrinA5_0                         0.0078315603
## l2calreticulin_3                   0.0078302044
## l2MIA_0                            0.0078178054
## proteinZinhibitor_12               0.0078160677
## GIIE_0                             0.0078117386
## IL1R4_0                            0.0078017136
## l2IL1RAcP_3                        0.0077313211
## l2RNF43_0                          0.0077252252
## ltrig_12                           0.0077142857
## PCNA_0                             0.0077039337
## BAFF_0                             0.0077037037
## Siglec9_0                          0.0076954023
## C5a_0                              0.0076918768
## l2FCRL3_3                          0.0076862745
## MCSFR_6                            0.0076823529
## l2Cadherin2_0                      0.0076802508
## nighttime_min_sens_glucose_0       0.0076800000
## d_lhdl120                          0.0076761905
## l2PLXC1_3                          0.0076753388
## l2C1q_0                            0.0076734694
## BCL6_12                            0.0076595745
```

```
## l2FGF19_0                          0.0076595745
## l2Caspase2_6                       0.0076544850
## Triglyceride_6                     0.0076521739
## Axis3MaxCounts_0                   0.0076521739
## IL9_0                              0.0076521739
## PSelectin_3                        0.0076521739
## l2BCMA_12                          0.0076521739
## XF                                 0.0076454545
## B7H2_0                             0.0076444444
## CREL1_0                            0.0076444444
## PTHrP_12                           0.0076444444
## l2CarbonicanhydraseVII_12          0.0076444444
## l2KPCT_3                           0.0076423303
## l2PCadherin_6                      0.0076410628
## RS3_0                              0.0076363636
## LYPD3_3                            0.0076363636
## BCAM_0                             0.0076279070
## l2TNFSF18_0                        0.0076279070
## l2BSP_0                            0.0076279070
## GITR_0                             0.0076260870
## ARR                                0.0076190476
## EDA_0                              0.0076190476
## PDPK1_0                            0.0076111111
## HCE003167_0                        0.0076097561
## l2SHP2_6                           0.0076097561
## Transferrin_0                      0.0076095238
## sRANKL_0                           0.0076000000
## l2PFD5_0                           0.0075897436
## l2SNAA_0                           0.0075897436
## l2TNR4_3                           0.0075897436
## GIIE_12                            0.0075789474
## l2SLIK1_0                          0.0075789474
## l2Epithelialcellkinase_6           0.0075789474
## MBL_3                              0.0075675676
## GPC2_3                             0.0075675676
## catglucose                         0.0075675676
## l2LTBP4_0                          0.0075675676
## l2Groa_3                           0.0075675676
## l2ADAM12_3                         0.0075675676
## GPDA_12                            0.0075555556
## dopadecarboxylase_3                0.0075428571
## l2NLGNX_6                          0.0075294118
## EGVEGF_0                           0.0075151515
## FGF10_0                            0.0075151515
## CalciumCorr_9                      0.0075000000
## MO2R1_0                            0.0075000000
## JNK2_3                             0.0075000000
## PSMA_3                             0.0075000000
## HIV2Rev_12                         0.0075000000
## TSP4_12                            0.0075000000
## l2LAG1_0                           0.0075000000
## l2PLK1_6                           0.0075000000
## l2Ddimer_6                         0.0075000000
## l2AnnexinV_12                      0.0075000000
```

```
## HPLN1_0                              0.0074482759
## Layilin_6                            0.0074482759
## IOA                                  0.0074482759
## HR_Standing_2_0                      0.0074334365
## l2Transferrin_0                      0.0074285714
## l2HistoneH2Az_3                      0.0074285714
## IPAQ_ModerateMETs_Trun_6             0.0074074074
## CaMKKalpha_12                        0.0074074074
## daytime_avg_sensor_glucose_12        0.0073633333
## TGM3_0                               0.0073600000
## l2BQB                                0.0073600000
## l2AK1A1_0                            0.0073600000
## l2IL10_6                             0.0073600000
## NEUREGULIN1_0                        0.0073504125
## l2SEM5A_3                            0.0073504125
## l2NG36_3                             0.0073504125
## l2CD59_6                             0.0073504125
## lcrp_6                               0.0073504125
## WISP1_3                              0.0073478261
## LAG3_0                               0.0073369565
## l2ICOS_0                             0.0073369565
## l2RSPO4_6                            0.0073369565
## l2LRRK2_12                           0.0073369565
## GI24_0                               0.0073333333
## l2IFNb_6                             0.0073333333
## inModerate_6                         0.0073229314
## PDGFAA_6                             0.0073229314
## lQUICKI_0                            0.0073229314
## l2EphB4_6                            0.0073147392
## HCC1_0                               0.0073083004
## FAK1_0                               0.0073043478
## BMPRII_0                             0.0072930233
## SEPR_0                               0.0072930233
## l2IL4_6                              0.0072930233
## l2MBL_12                             0.0072930233
## HR_Sitting_1_0                       0.0072770563
## TNFsRII_0                            0.0072770563
## l2FST_3                              0.0072770563
## l2PF4_6                              0.0072770563
## FN13_0                               0.0072727273
## HCE000104_3                          0.0072727273
## lCPeptide_9                          0.0072727273
## l2BLC_0                              0.0072727273
## l2Lymphotactin_3                     0.0072727273
## l2cJun_12                            0.0072727273
## IL10Ra_0                             0.0072603517
## l2HXK1_6                             0.0072603517
## PLCG1_0                              0.0072444334
## Proteinase3_6                        0.0072428571
## l2MIC1_0                             0.0072428571
## l2IL17sR_6                           0.0072428571
## PTH_9                                0.0072380952
## l2TPSB2_0                            0.0072380952
## l2DRG1_6                             0.0072380952
```

```
## l2ERK1_12                          0.0072380952
## Macrophagemannosereceptor_0        0.0072245153
## EFNB1_3                            0.0072245153
## NXPH1_3                            0.0072245153
## MFGM_12                            0.0072052632
## l2TopoisomeraseI_3                 0.0072052632
## l2CarbonicanhydraseVII_3           0.0072052632
## MCV_9                              0.0072000000
## ANK2_0                             0.0072000000
## lMIC1_0                            0.0072000000
## lInsulin_12                        0.0072000000
## IL17RC_0                           0.0071850312
## BFL1_3                             0.0071850312
## TrkB_3                             0.0071637427
## LG3BP_3                            0.0071637427
## IWQOL_SexScaleAdj_12               0.0071578947
## EphB6_0                            0.0071578947
## l2HO2_0                            0.0071578947
## l2Myoglobin_6                      0.0071578947
## l2AntithrombinIII_3                0.0071413127
## StepsMaxCounts_0                   0.0071176471
## l2FGF18_0                          0.0071176471
## CTGF_0                             0.0071111111
## l2IL1b_0                           0.0071111111
## l2OLR1_0                           0.0071052632
## IWQOL_Physical6_12                 0.0070926407
## l2gp130soluble_12                  0.0070892308
## l2CLF1CLCComplex_0                 0.0070661765
## SH21A_0                            0.0070588235
## STRATIFIN_0                        0.0070588235
## cMyc_6                             0.0070588235
## BoneproteoglycanII_3               0.0070400000
## OX2G_3                             0.0070381232
## l2CKMM_3                           0.0070381232
## l2EP15R_6                          0.0070381232
## HCK_3                              0.0070343031
## ADAM12_3                           0.0070343031
## CD59_6                             0.0070343031
## MIG_3                              0.0070144928
## l2CAMK2B_3                         0.0070144928
## VectorMagnitudeMaxCounts_6         0.0070000000
## UNC5H4_0                           0.0070000000
## PDGFRb_12                          0.0070000000
## MMP10_12                           0.0070000000
## l2IL1sRII_0                        0.0070000000
## l2C9_6                             0.0070000000
## percent_time_over_250_night_12     0.0069938534
## sICAM2_0                           0.0069938534
## NG36_0                             0.0069938534
## l2GV_3                             0.0069938534
## ST4S6_6                            0.0069766407
## l2MMEL2_6                          0.0069723320
## l2PDE9A_6                          0.0069723320
## excursions_over_200_12             0.0069498708
```

```
## sCD163_3                          0.0069498708
## RSPO4_12                          0.0069498708
## Triglyceride_9                    0.0069428571
## sICAM3_0                          0.0069428571
## SBP_Standing_1_3                  0.0069333333
## l2TEC_6                           0.0069264069
## l2NogoReceptor_6                  0.0069142857
## EPOR_0                            0.0069018718
## CBX5_0                            0.0069018718
## l2TMA_3                           0.0069018718
## CytochromeP4503A4_3               0.0068809524
## TSH_9                             0.0068681319
## XEDAR_0                           0.0068681319
## FCRL3_6                           0.0068612245
## CRIS3_0                           0.0068571429
## PLXB2_3                           0.0068571429
## HCK_6                             0.0068571429
## l2CD40ligandsoluble_0             0.0068571429
## l2ER_12                           0.0068571429
## l2CystatinS_12                    0.0068571429
## RASA1_0                           0.0068492808
## lIPAQ_TotalMETs_0                 0.0068266667
## l2NCC27_3                         0.0067914068
## Dynactinsubunit2_12               0.0067821458
## l2LIGHT_12                        0.0067820513
## SBP_Standing_2_0                  0.0067724868
## ASGR1_6                           0.0067692308
## PSA_3                             0.0067602339
## l2tau_3                           0.0067251411
## PSMA_0                            0.0066992754
## IWQOL_Distress4_0                 0.0066818182
## TSLPR_12                          0.0066818182
## lacr_3                            0.0066818182
## ARMEL_6                           0.0066666667
## l2FFI                             0.0066666667
## Light_3                           0.0066666667
## GP1BA_3                           0.0066285714
## TNR4_3                            0.0065921569
## ProteindisulfideisomeraseA3_3     0.0065844156
## IWQOL_Physical9_0                 0.0065636364
## CBG_0                             0.0065454545
## ANGL4_3                           0.0065454545
## l2PGRPS_3                         0.0065454545
## l2VEGFsR2_6                       0.0065454545
## Axis3AverageCounts_0              0.0064800000
## l2FLRT2_6                         0.0064173913
## DBP_Sitting_1_6                   0.0064000000
## Glutamatecarboxypeptidase_0       0.0064000000
## GIIE_3                            0.0064000000
## PIK3CAPIK3R1_3                    0.0064000000
## l2Lectinmannosebinding2_3         0.0064000000
## l2Flt3ligand_6                    0.0064000000
## min_sensor_0                      0.0063231561
## cJun_6                            0.0062769231
```

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## PDE7A_0                              0.0062222222
## DSC2_6                               0.0062222222
## l2suPAR_0                            0.0062222222
## l2Granulysin_0                       0.0062222222
## l2CSH_3                              0.0062222222
## l2C1QBP_3                            0.0062222222
## l2HCE000414_6                        0.0062222222
## l2PARC_6                             0.0062222222
## SBP_Standing_2_screening             0.0060000000
## SBP_Standing_Avg_6                   0.0060000000
## RBC_3                                0.0060000000
## IPAQ_VigorousMETs_Trun_12_LOCF       0.0060000000
## HXK1_0                               0.0060000000
## IL2_0                                0.0060000000
## BARK1_0                              0.0060000000
## PK3CG_0                              0.0060000000
## WNK3_0                               0.0060000000
## IL3Ra_3                              0.0060000000
## RBP_3                                0.0060000000
## DnaJhomolog_6                        0.0060000000
## PKBbeta_6                            0.0060000000
## wtloss_6_9                           0.0060000000
## l2C5_0                               0.0060000000
## l2BASI_0                             0.0060000000
## l2VEGFsR2_0                          0.0060000000
## l2GI24_6                             0.0060000000
## GPC6_3                               0.0059069767
## l2CarbonicanhydraseVII_0             0.0058974359
## RAD51_0                              0.0058666667
## Waistcircumference_screening         0.0057142857
## MATN2_0                              0.0057142857
## CDK5p35_0                            0.0057142857
## IL1Ra_0                              0.0057142857
## FAM3D_3                              0.0057142857
## TEC_6                                0.0057142857
## Plasminogen_6                        0.0057142857
## l2cMyc_0                             0.0057142857
## l2PIANP_0                            0.0057142857
## l2C5a_0                              0.0057142857
## l2PA2G4_0                            0.0057142857
## l2LBP_3                              0.0057142857
## l2TIMD3_3                            0.0057142857
## l2PKCG_3                             0.0057142857
## l2p53_3                              0.0057142857
## l2LTBP4_6                            0.0057142857
## l2PK3CG_6                            0.0057142857
## l2bECGF_6                            0.0057142857
## l2IL17_6                             0.0057142857
## l2HMGN1_6                            0.0057142857
## CTGF_6                               0.0056888889
## l2ZNRF3_0                            0.0054034632
## UMicroalb_9                          0.0053333333
## Duration_Month                       0.0053333333
## CDK8cyclinC_0                        0.0053333333
```

```
## RPS6KA3_0                          0.0053333333
## DUS3_0                             0.0053333333
## transcriptionfactorMLR1isofo       0.0053333333
## CalcineurinBa_3                    0.0053333333
## SPINT2_12                          0.0053333333
## lferritin                          0.0053333333
## d_luricacid120                     0.0053333333
## l2EBP2_0                           0.0053333333
## l2PKCA_6                           0.0053333333
## l2IFNA7_12                         0.0053333333
## l2ENTP3_12                         0.0053333333
## ADAM12_6                           0.0051627907
## lvitD_6                            0.0050133333
## GPC5_6                             0.0050068027
## l2Calcineurin_3                    0.0049855072
## gmi_0                              0.0049777778
## l2DPK                              0.0049777778
## l2GAPDHliver_3                     0.0049777778
## l2HSP40_3                          0.0049696970
## l2PIGR_6                           0.0049612403
## CPNE1_0                            0.0049523810
## l2IL1sRII_3                        0.0049523810
## l2IDUA_3                           0.0049523810
## AverageMVPAPerday_0                0.0049430894
## B72_0                              0.0049430894
## Juice_PerWeek                      0.0049333333
## kcals_3                            0.0049333333
## CoagulationFactorXa_6              0.0049333333
## l2MED1_3                           0.0049333333
## AverageMVPAPerday_6                0.0049230769
## FGF16_3                            0.0049230769
## l2IL17B_0                          0.0049230769
## l2NSF1C_3                          0.0049230769
## l2FYN_6                            0.0049230769
## RANK_3                             0.0049122807
## l2NAGK_3                           0.0049009009
## FN14_0                             0.0048761905
## SPHK2_0                            0.0048627451
## l2amyloidprecursorprotein_3        0.0048627451
## Tropomyosin2_6                     0.0048484848
## CDK2cyclinA_0                      0.0048333333
## Time_6                             0.0048000000
## Nectinlikeprotein1_0               0.0048000000
## TNR4_12                            0.0046855960
## l2H31_0                            0.0046666667
## AUK                                0.0046582850
## Semaphorin3E_3                     0.0046582850
## l2NADPHP450Oxidoreductase_3        0.0046582850
## inModerate_0                       0.0046437479
## Phosphoglyceratemutase1_3          0.0046437479
## STRATIFIN_3                        0.0046437479
## ETHE1_0                            0.0046376812
## PAPPA_3                            0.0046127125
## ING1_6                             0.0045787546
```

```
## QUICKI_0                          0.0043333333
## l2ActivinA_3                      0.0043056478
## Myeloperoxidase_0                 0.0042920635
## IL4_0                             0.0039230769
## l2TACI_0                          0.0039230769
## JAK2_0                            0.0039215686
## Galectin8_12                      0.0039215686
## l2ApoE_6                          0.0039215686
## Chymase_0                         0.0039200000
## IL22_12                           0.0039200000
## l2CREL1_3                         0.0039200000
## MFRP_0                            0.0039183673
## VEGFsR3_6                         0.0039183673
## KPCI_0                            0.0039166667
## EMAP2_3                           0.0039166667
## CYTT_6                            0.0039166667
## logghrelin_6                      0.0039166667
## l2IL2sRa_0                        0.0039166667
## l2ERAB_0                          0.0039166667
## l2PESC_0                          0.0039166667
## l2GPVI_3                          0.0039166667
## l2PolyUbiquitinK48_6              0.0039166667
## SECTM1_0                          0.0039148936
## BTC_3                             0.0039148936
## PAK3_3                            0.0039148936
## PRL_6                             0.0039148936
## HCE004152_12                      0.0039148936
## l2kallikrein8_0                   0.0039148936
## l2CystatinM_0                     0.0039148936
## l2TFF3_3                          0.0039148936
## l2HCE004152_6                     0.0039148936
## l2Nidogen_6                       0.0039148936
## TANITAVisceralFatRating_6         0.0039130435
## FCRL3_0                           0.0039130435
## KininogenHMW_0                    0.0039130435
## NRX1B_3                           0.0039130435
## Lectinmannosebinding2_3           0.0039130435
## l2EphrinB3_0                      0.0039130435
## l2a1Antitrypsin_3                 0.0039130435
## l2JAG1_3                          0.0039130435
## l2AMPKa2b2g1_3                    0.0039130435
## l2MP2K3_3                         0.0039130435
## waso                              0.0039111111
## H31_0                             0.0039111111
## LAG1_0                            0.0039111111
## IL24_0                            0.0039111111
## ERP29_0                           0.0039111111
## Myokinasehuman_0                  0.0039111111
## Kallikrein4_3                     0.0039111111
## CD109_3                           0.0039111111
## C4_3                              0.0039111111
## HCE004152_6                       0.0039111111
## HSP90b_6                          0.0039111111
## l2MMP9_3                          0.0039111111
```

```
## SBP_Standing_Avg_screening          0.0039090909
## daytime_min_sensor_glucose_0        0.0039090909
## Glucocorticoidreceptor_0            0.0039090909
## UBC9_3                              0.0039090909
## DCSIGNR_3                           0.0039090909
## LYNB_3                              0.0039090909
## SUMO3_3                             0.0039090909
## CD22_6                              0.0039090909
## SMOC1_12                            0.0039090909
## a2HSGlycoprotein_12                 0.0039090909
## B7H1_12                             0.0039090909
## sLeptinR_12                         0.0039090909
## l2HistoneH2Az_0                     0.0039090909
## l2IgA_3                             0.0039090909
## l2CDK2cyclinA_3                     0.0039090909
## l2MOZ_6                             0.0039090909
## l2sLRP1_6                           0.0039090909
## insulinpmol_6                       0.0039069767
## Proteindisulfideisomerase_0         0.0039069767
## Calcineurin_0                       0.0039069767
## IgD_0                               0.0039069767
## LG3BP_0                             0.0039069767
## GV_6                                0.0039069767
## l2SonicHedgehog_0                   0.0039069767
## l2BMP1_0                            0.0039069767
## l2HGFA_0                            0.0039069767
## l2GPC5_3                            0.0039069767
## l2IL18BPa_6                         0.0039069767
## l2HPG_12                            0.0039069767
## pc11                                0.0039069767
## HR_Standing_1_6                     0.0039047619
## SMAD3_3                             0.0039047619
## LY86_3                              0.0039047619
## FCG2A_12                            0.0039047619
## l2IL4_0                             0.0039047619
## l2NET4_3                            0.0039047619
## l2RSPO2_6                           0.0039047619
## l2Elafin_6                          0.0039047619
## IPAQ_7_6                            0.0039024390
## HSP70_0                             0.0039024390
## IF4G2_0                             0.0039024390
## PBEF_0                              0.0039024390
## Semaphorin6A_0                      0.0039024390
## CD5L_3                              0.0039024390
## TSG6_3                              0.0039024390
## CAMK2A_6                            0.0039024390
## GOR                                 0.0039024390
## LY9_12                              0.0039024390
## Transferrin_12                      0.0039024390
## l2CD97_0                            0.0039024390
## l2IL19_0                            0.0039024390
## l2BOC_3                             0.0039024390
## l2ProteindisulfideisomeraseA3_6     0.0039024390
## l2EphrinA4_12                       0.0039024390
```

```
## l2Fibrinogengchaindimer_12          0.0039024390
## HR_Standing_Avg_3                   0.0039000000
## Glucose_3                           0.0039000000
## IPAQ_Sitting_6_LOCF                 0.0039000000
## IL16_0                              0.0039000000
## HSP40_0                             0.0039000000
## SE6L2_0                             0.0039000000
## LYN_3                               0.0039000000
## PIANP_6                             0.0039000000
## sLRP1_12                            0.0039000000
## l2AMGO2_0                           0.0039000000
## l2TNFSF15_0                         0.0039000000
## l2LYPD3_3                           0.0039000000
## l2IL3Ra_3                           0.0039000000
## l2RNaseH1_3                         0.0039000000
## l2GPC2_6                            0.0039000000
## l2HFJ                               0.0039000000
## SBP_Sitting_1_screening             0.0038974359
## HR_Sitting_Avg_screening            0.0038974359
## AlkPhos_6                           0.0038974359
## Axis1Counts_12                      0.0038974359
## min_spent_over_200_12               0.0038974359
## EphrinB3_3                          0.0038974359
## DLRB1_3                             0.0038974359
## IF4A3_6                             0.0038974359
## IGFIsR_12                           0.0038974359
## RANK_12                             0.0038974359
## l2CyclophilinA_0                    0.0038974359
## l2PH_6                              0.0038974359
## IL22BP_0                            0.0038947368
## CYTN_0                              0.0038947368
## ThyroxineBindingGlobulin_3          0.0038947368
## HOC                                 0.0038947368
## JAK2_12                             0.0038947368
## l2CD22_0                            0.0038947368
## l2ULBP1_0                           0.0038947368
## l2IL15Ra_0                          0.0038947368
## l2TGFb2_0                           0.0038947368
## l2Triosephosphateisomerase_3        0.0038947368
## l2IgE_6                             0.0038947368
## l2BPI_12                            0.0038947368
## KEAP1_0                             0.0038918919
## PSD7_12                             0.0038918919
## l2BNP32_0                           0.0038918919
## l2ARSB_3                            0.0038918919
## l2EPHA3_3                           0.0038918919
## l2CSF1_3                            0.0038918919
## IWQOL_Distress4_12                  0.0038888889
## Semaphorin3E_0                      0.0038888889
## Fassoluble_0                        0.0038888889
## CPNE1_3                             0.0038888889
## l2IL1sRI_0                          0.0038888889
## l2CystatinC_6                       0.0038888889
## l2Properdin_12                      0.0038888889
```

```
## l2ApoD_12                          0.0038888889
## ETHE1_3                            0.0038857143
## SGTA_3                             0.0038857143
## RANK_6                             0.0038857143
## REG4_12                            0.0038857143
## l2BoneproteoglycanII_0             0.0038857143
## l2EphrinA2_6                       0.0038857143
## DBP_Sitting_Avg_0                  0.0038823529
## AverageLengthofSedentaryBout       0.0038823529
## Glucagon_3                         0.0038823529
## Myokinasehuman_3                   0.0038823529
## l2PIAS4_0                          0.0038823529
## l2ActivinRIB_0                     0.0038823529
## l2BMPER_6                          0.0038823529
## l2RAC3_12                          0.0038823529
## TANITATBW_9                        0.0038787879
## IgE_0                              0.0038787879
## CyclinB1_3                         0.0038787879
## l2PRL_3                            0.0038787879
## UricAcid_0                         0.0038750000
## FGFR2_0                            0.0038750000
## l2PlGF_12                          0.0038750000
## Mother_Cancer                      0.0038709677
## r_mage_12                          0.0038709677
## ApoL1_6                            0.0038709677
## l2IL13_0                           0.0038709677
## l2CAMK1D_0                         0.0038709677
## l2sICAM2_3                         0.0038709677
## LD78beta_0                         0.0038666667
## l2HCE004331_0                      0.0038666667
## NET1_3                             0.0038620690
## l2Osteopontin_0                    0.0038620690
## l2EphA1_12                         0.0038620690
## LTBP4_0                            0.0038571429
## bEndorphin_0                       0.0038571429
## OLR1_0                             0.0038571429
## NKp44_6                            0.0038571429
## IDE_6                              0.0038571429
## lIPAQ_ModerateMETs_6               0.0038571429
## l2Flt3ligand_0                     0.0038571429
## Neurotrophin5_0                    0.0038518519
## l2MIP3a_3                          0.0038518519
## l2Galectin3_6                      0.0038518519
## DBP_Sitting_2_6                    0.0038461538
## SLAF7_0                            0.0038461538
## Tropomyosin4_0                     0.0038461538
## Azurocidin_3                       0.0038461538
## d_dbp012                           0.0038461538
## l2DYRK3_0                          0.0038461538
## l2STAT6_3                          0.0038461538
## BasophilAuto_0                     0.0038400000
## CNTF_0                             0.0038400000
## HBEGF_0                            0.0038400000
## NRX3B_6                            0.0038400000
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## l2TrATPase_6                      0.0038400000
## l2TrkA_12                         0.0038400000
## TANITAMuscleMass_6                0.0038333333
## C3d_0                             0.0038333333
## MAPK2_6                           0.0038333333
## l2FN13_0                          0.0038333333
## l2EFNB1_12                        0.0038333333
## TimeToEat_Lunch                   0.0038260870
## insulinpmol_12                    0.0038260870
## Flt3ligand_0                      0.0038260870
## CHM                               0.0038260870
## CarbonicAnhydraseIV_6             0.0038260870
## IL17RD_6                          0.0038260870
## SORC2_6                           0.0038260870
## l2PLPP_0                          0.0038260870
## l2IL1a_6                          0.0038260870
## TANITAVisceralFatRating_9         0.0038181818
## UCreatinine_12                    0.0038181818
## max_sensor_12                     0.0038181818
## EMR2_0                            0.0038181818
## TCCR_0                            0.0038181818
## NogoReceptor_3                    0.0038181818
## TGFb2_6                           0.0038181818
## XG                                0.0038095238
## CJQ                               0.0038095238
## Thyroglobulin_0                   0.0038095238
## DR6_0                             0.0038095238
## IL17RD_3                          0.0038095238
## HCE000342_6                       0.0038095238
## S100A12_6                         0.0038095238
## DAPK2_12                          0.0038095238
## PDGFAA_12                         0.0038095238
## l2ER_0                            0.0038095238
## l2FSH_0                           0.0038095238
## l2CNTN2_0                         0.0038095238
## l2Nectinlikeprotein1_0            0.0038095238
## l2PBEF_3                          0.0038095238
## l2Trefoilfactor2_3                0.0038095238
## l2Ckine_6                         0.0038095238
## l2ADAMTS4_12                      0.0038095238
## Ferritin_9                        0.0038000000
## inLight_3                         0.0038000000
## Freedson1998Bouts_6               0.0038000000
## TGFbRIII_0                        0.0038000000
## Thrombospondin1_6                 0.0038000000
## TSP2_12                           0.0038000000
## SDF1_12                           0.0038000000
## l2NUDC3_0                         0.0038000000
## l2ActivinAB_3                     0.0038000000
## l2PARC_12                         0.0038000000
## l2Testican2_12                    0.0038000000
## CPeptide_12                       0.0037894737
## ZNRF3_0                           0.0037894737
## BLC_0                             0.0037894737
```

```
## Cadherin2_0                          0.0037894737
## CTAPIII_3                            0.0037894737
## Cadherin12_6                         0.0037894737
## FAM107B_12                           0.0037894737
## lIPAQ_WalkingMETs_Trun_12            0.0037894737
## l2HINT1_12                           0.0037894737
## CoagulationFactorX_0                 0.0037777778
## CoagulationFactorIXab_6              0.0037777778
## l2FCN1_0                             0.0037777778
## l2bECGF_3                            0.0037777778
## l2Flt3_12                            0.0037777778
## CHL1_0                               0.0037707391
## percent_time_over_180_day_12         0.0037662745
## CKDEPI_12                            0.0037647059
## l2LTBP4_3                            0.0037647059
## l2sRAGE_3                            0.0037647059
## l2Mcl1_6                             0.0037647059
## l2IL17B_12                           0.0037647059
## l2CATF_12                            0.0037647059
## TFPI_0                               0.0037568027
## l2UBE2N_0                            0.0037568027
## l2Properdin_3                        0.0037568027
## l2Peroxiredoxin5_6                   0.0037568027
## d_weight_60                          0.0037517730
## l2PCSK7_3                            0.0037517730
## l2PGCB_12                            0.0037517730
## prostaticbindingprotein_0            0.0037500000
## BLC_12                               0.0037465310
## l2ADAMTS5_0                          0.0037465310
## IFNg_3                               0.0037410628
## SonicHedgehog_12                     0.0037410628
## LymphocyteAuto_6                     0.0037353535
## l2CAMK1_6                            0.0037353535
## MPV_9                                0.0037333333
## NET1_12                              0.0037333333
## l2LGMN_12                            0.0037293869
## l2LG3BP_12                           0.0037293869
## l2IL18Rb_3                           0.0037231451
## l2Aggrecan_3                         0.0037231451
## OX40Ligand_0                         0.0037166086
## IL3_0                                0.0037142857
## HSP60_3                              0.0037142857
## MAPK5_6                              0.0037142857
## l2ULBP2_0                            0.0037142857
## MICA_3                               0.0037097561
## ThyroxineBindingGlobulin_12          0.0037097561
## l2CONA1_3                            0.0037097561
## Fucosyltransferase3_0                0.0037025641
## B7_12                                0.0037025641
## l2RXFP1_0                            0.0037025641
## l2MO2R1_6                            0.0037025641
## TGFb1_0                              0.0036950067
## l2ASAHL_0                            0.0036950067
## l2ALK1_3                             0.0036950067
```

```
## Creatinine_9                          0.0036923077
## PLXC1_6                               0.0036870555
## l2IGFBP7_0                            0.0036786787
## l2IL1R4_0                             0.0036666667
## insulinpmol_0                         0.0036506239
## l2IRF1_0                              0.0036506239
## l2TNFSF18_12                          0.0036506239
## SMAD2_6                               0.0036363636
## min_spent_70_180_night_12             0.0036219512
## TANITAFFM_3                           0.0036045977
## UB2G2_0                               0.0036000000
## PDE4D_6                               0.0036000000
## l2MK08_3                              0.0036000000
## l2HCE004152_0                         0.0035986395
## l2CD36ANTIGEN_12                      0.0035911330
## CD48_0                                0.0035818686
## l2IL13_6                              0.0035767196
## l2HCK_0                               0.0035612536
## LIN7B_0                               0.0035555556
## l2LIGHT_3                             0.0035555556
## l2HAI1_12                             0.0035555556
## l2DAN_6                               0.0035266667
## l2Thymidinekinase_6                   0.0035266667
## l2OPG_12                              0.0035266667
## l2AnnexinV_0                          0.0035102564
## l2LaminB1_12                          0.0035072464
## TANITATBW_0                           0.0035000000
## IL12RB2_0                             0.0035000000
## SCGFalpha_0                           0.0035000000
## sFRP3_6                               0.0035000000
## GTD                                   0.0035000000
## l2SOD3_6                              0.0035000000
## l2FABPL_12                            0.0035000000
## l2C8_12                               0.0035000000
## l2IL1F6_0                             0.0034632035
## l2IL15Ra_12                           0.0034420168
## TANITABoneMass_0                      0.0034285714
## TANITAMetabolicAge_6                  0.0034285714
## SHC1_0                                0.0034285714
## SECTM1_3                              0.0034285714
## SPINT2_3                              0.0034285714
## PSA2_3                                0.0034285714
## EGFRvIII_3                            0.0034285714
## MIP5_6                                0.0034285714
## l2EphrinA5_3                          0.0034285714
## l2MIC1_3                              0.0034285714
## l2Glucagon_3                          0.0034285714
## l2NogoReceptor_3                      0.0034285714
## l2RXFP1_6                             0.0034285714
## l2HBEGF_6                             0.0034285714
## l2WISP1_12                            0.0034285714
## C5_0                                  0.0034105263
## l2Semaphorin6A_3                      0.0034105263
## MPV_6                                 0.0033333333
```

```
## Axis3Counts_0                          0.0033333333
## Mcl1_0                                 0.0033333333
## B7_0                                   0.0033333333
## TNFSF18_0                              0.0033333333
## ProteinC_0                             0.0033333333
## Spondin1_0                             0.0033333333
## IntegrinaVb5_0                         0.0033333333
## PARK7_0                                0.0033333333
## CathepsinG_3                           0.0033333333
## PERL_3                                 0.0033333333
## NterminalproBNP_3                      0.0033333333
## HIF1a_12                               0.0033333333
## NKG2D_12                               0.0033333333
## hnRNPK_12                              0.0033333333
## l2BCMA_0                               0.0033333333
## l2ADAMTS4_0                            0.0033333333
## l2MRC2_0                               0.0033333333
## l2FN14_0                               0.0033333333
## l2transcriptionfactorMLR1isofo         0.0033333333
## l2CathepsinB_3                         0.0033333333
## l2MK11_3                               0.0033333333
## l2Desmoglein1_6                        0.0033333333
## l2DLC8_6                               0.0033333333
## l2CoagulationFactorX_6                 0.0033333333
## l2HCC1_12                              0.0033333333
## l2DAN_12                               0.0033333333
## l2IRE                                  0.0033333333
## l2RBP_12                               0.0033333333
## l2TRAILR2_12                           0.0032666667
## TANITAMuscleMass_screening             0.0032000000
## IWQOL_Sex4_0                           0.0032000000
## IWQOL_Physical11_12                    0.0032000000
## ARS                                    0.0032000000
## excursions_over_140_0                  0.0032000000
## S100A4_0                               0.0032000000
## MK08_0                                 0.0032000000
## MDM2_0                                 0.0032000000
## GRN_0                                  0.0032000000
## HCE000414_3                            0.0032000000
## MSPR_3                                 0.0032000000
## MP2K4_3                                0.0032000000
## ABL2_3                                 0.0032000000
## SHC1_3                                 0.0032000000
## RUXF_3                                 0.0032000000
## INGR2_3                                0.0032000000
## ApoptosisregulatorBclW_6               0.0032000000
## PF4_6                                  0.0032000000
## ART_6                                  0.0032000000
## ER_6                                   0.0032000000
## Nectinlikeprotein2_6                   0.0032000000
## EphA5_6                                0.0032000000
## CyclophilinA_6                         0.0032000000
## Kras_6                                 0.0032000000
## CarbonicanhydraseVII_12                0.0032000000
```

```
## IMH                                  0.0032000000
## l2VEGF_0                             0.0032000000
## l2GA7331protein_0                    0.0032000000
## l2PAI1_0                             0.0032000000
## l2GFAP_0                             0.0032000000
## l2Chitotriosidase1_0                 0.0032000000
## l2Neurotrophin3_0                    0.0032000000
## l2Ku70_3                             0.0032000000
## l2PTP1C_3                            0.0032000000
## l2MnSOD_3                            0.0032000000
## l2NADPHP450Oxidoreductase_6          0.0032000000
## l2CD22_6                             0.0032000000
## l2CD48_6                             0.0032000000
## l2CD70_6                             0.0032000000
## l2Enterokinase_12                    0.0032000000
## l2CRDL1_12                           0.0032000000
## DBP_Standing_2_3                     0.0030000000
## DBP_Sitting_2_12                     0.0030000000
## IWQOL_Esteem2_0                      0.0030000000
## Time_0                               0.0030000000
## CadherinE_0                          0.0030000000
## PRL_0                                0.0030000000
## Kallikrein7_0                        0.0030000000
## Lymphotoxina1b2_0                    0.0030000000
## Marapsin_0                           0.0030000000
## IL1sR9_0                             0.0030000000
## KLRF1_0                              0.0030000000
## CyclophilinF_0                       0.0030000000
## resistin_3                           0.0030000000
## PAK7_3                               0.0030000000
## sRAGE_3                              0.0030000000
## C6_3                                 0.0030000000
## CK2A1B_3                             0.0030000000
## BMP7_6                               0.0030000000
## ASAH2_6                              0.0030000000
## CarbonicanhydraseXIII_6              0.0030000000
## SPD_6                                0.0030000000
## PDE3A_6                              0.0030000000
## PACAP38_6                            0.0030000000
## UB2G2_6                              0.0030000000
## GFRa1_12                             0.0030000000
## l2PKCA_0                             0.0030000000
## l2CarbonicanhydraseXIII_0            0.0030000000
## l2Carbonicanhydrase9_0               0.0030000000
## l2Cytochromec_3                      0.0030000000
## l2HIPK3_3                            0.0030000000
## l2Caspase3_3                         0.0030000000
## l2Secretin_3                         0.0030000000
## l2CTAPIII_3                          0.0030000000
## l2MIS_3                              0.0030000000
## l2PKCZ_6                             0.0030000000
## l2MMP17_6                            0.0030000000
## l2Artemin_6                          0.0030000000
## l2Ubiquitin_6                        0.0030000000
```

```
## l2HSP90b_6                          0.0030000000
## TANITAIdealBodyWeight_screen        0.0026666667
## Height_0                            0.0026666667
## PTH_12                              0.0026666667
## Light_0                             0.0026666667
## VectorMagnitudeMaxCounts_0          0.0026666667
## VectorMagnitudeCPM_0                0.0026666667
## AUE                                 0.0026666667
## Axis3Counts_12                      0.0026666667
## excursions_under_70_12              0.0026666667
## DBP_Standing_Avg_LAST               0.0026666667
## NormScale_1_0                       0.0026666667
## Vitronectin_0                       0.0026666667
## MMP7_0                              0.0026666667
## CoagulationFactorXa_0               0.0026666667
## IDUA_0                              0.0026666667
## FGFR3_0                             0.0026666667
## Corticotropinlipotropin_0           0.0026666667
## CTGF_3                              0.0026666667
## Galectin2_3                         0.0026666667
## BLC_3                               0.0026666667
## discoidindomainreceptor1_3          0.0026666667
## JAML1_3                             0.0026666667
## PDE3A_3                             0.0026666667
## Hat1_6                              0.0026666667
## GPVI_6                              0.0026666667
## PYY_6                               0.0026666667
## FGF12_6                             0.0026666667
## IMDH1_6                             0.0026666667
## CystatinC_12                        0.0026666667
## GPC2_12                             0.0026666667
## Tenascin_12                         0.0026666667
## logIFNb_3                           0.0026666667
## lAST_6                              0.0026666667
## l2FGF8B_0                           0.0026666667
## l2EDAR_0                            0.0026666667
## l2DKK3_0                            0.0026666667
## l2Fibronectin_0                     0.0026666667
## l2LSAMP_3                           0.0026666667
## l2sCD4_3                            0.0026666667
## l2IL24_3                            0.0026666667
## l2Catalase_3                        0.0026666667
## l2MMEL2_3                           0.0026666667
## l2SHPS1_3                           0.0026666667
## l2BAD_3                             0.0026666667
## l2WISP3_3                           0.0026666667
## l2GPVI_6                            0.0026666667
## l2HIDH_6                            0.0026666667
## l2TRAILR1_6                         0.0026666667
## l2HCG_6                             0.0026666667
## l2GP1BA_6                           0.0026666667
## l2PDE7A_6                           0.0026666667
## l2IFNgR1_6                          0.0026666667
## l2GDF9_12                           0.0026666667
```

```
## l2Renin_12                          0.0026666667
## l2LYN_12                            0.0026666667
## l2KPCT_12                           0.0026666667
## Hgb_0                               0.0020000000
## Caspase3_0                          0.0020000000
## ENP                                 0.0020000000
## l2MFRP_0                            0.0020000000
## l2MK08_0                            0.0020000000
## l2GPDA_3                            0.0020000000
## TotalMeds_12                        0.0019183673
## l2CD30Ligand_0                      0.0019111111
## IFNgR1_0                            0.0019000000
## SIRT2_3                             0.0018947368
## TSG6_0                              0.0018000000
## CaMKKalpha_0                        0.0017777778
## FLI_0                               0.0012307692
## Axis1CPM_3                          0.0011733333
## IPAQ_TotalMETs_Trun_12_LOCF         0.0007047619
```

CART

Classification

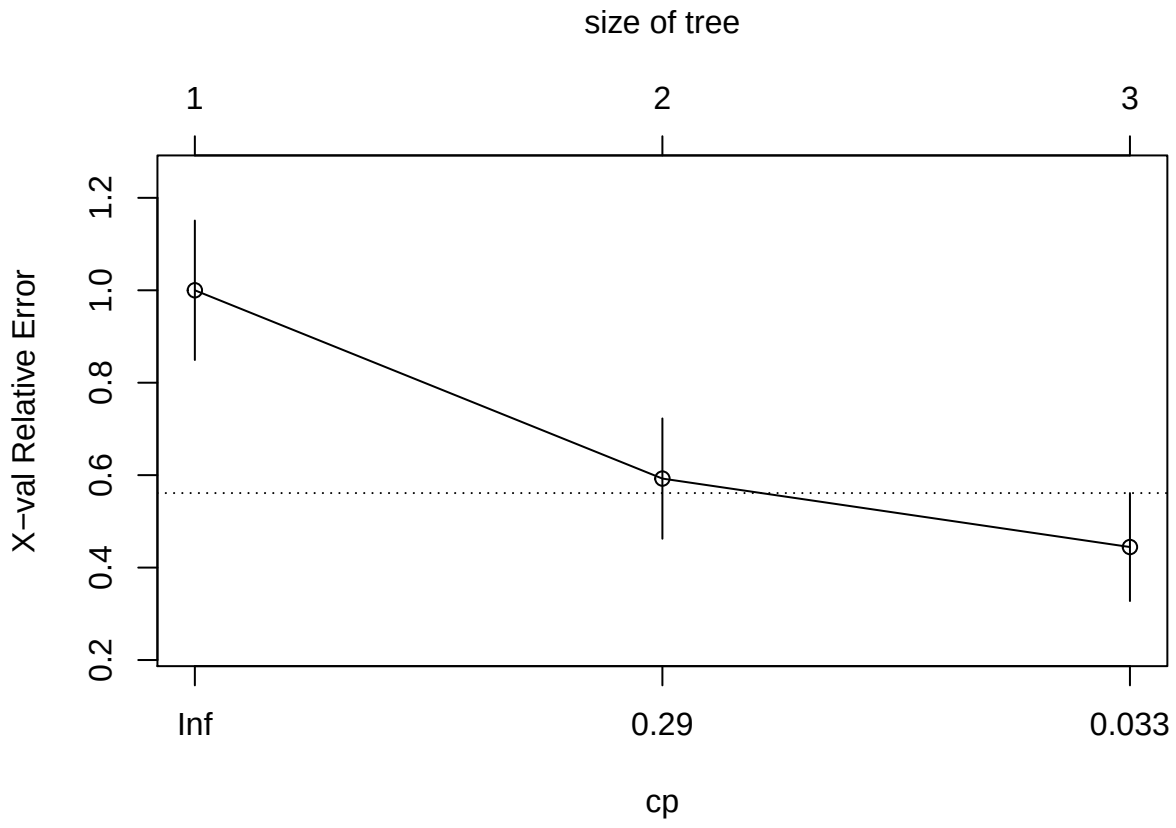
```
library(rpart)
library(rpart.plot)

fit1 <- rpart(remission~., method="class", data=data)

printcp(fit1)
```

```
##
## Classification tree:
## rpart(formula = remission ~ ., data = data, method = "class")
##
## Variables actually used in tree construction:
## [1] Glucose_12 HDL_12
##
## Root node error: 27/70 = 0.38571
##
## n= 70
##
##         CP nsplit rel error  xerror    xstd
## 1 0.74074      0   1.00000 1.00000 0.15084
## 2 0.11111      1   0.25926 0.59259 0.13012
## 3 0.01000      2   0.14815 0.44444 0.11679
```

```
plotcp(fit1)
```

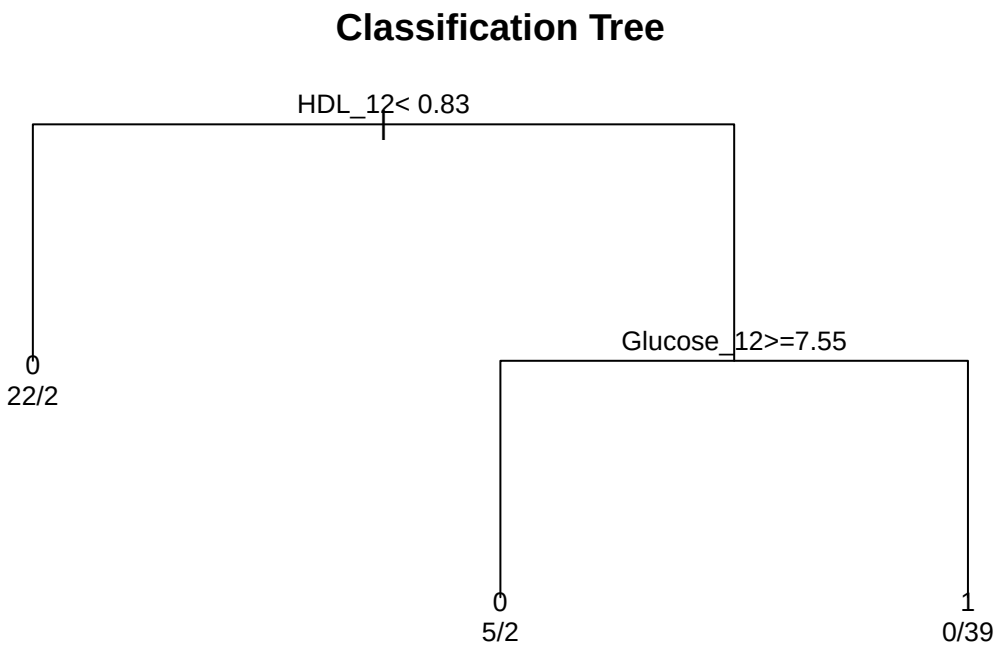



```
summary(fit1)
```

```
## Call:
## rpart(formula = remission ~ ., data = data, method = "class")
##   n= 70
##
##          CP nsplit rel error    xerror      xstd
## 1 0.7407407      0 1.0000000 1.0000000 0.1508354
## 2 0.1111111      1 0.2592593 0.5925926 0.1301200
## 3 0.0100000      2 0.1481481 0.4444444 0.1167863
##
## Variable importance
##                HDL_12           dfatmass120        Fibro_E_med_12
##                    16                    13                    13
##      SBP_Sitting_1_12            Height_12 Waistcircumference_12
##                    13                    12                    12
##                FBG_12           Glucose_12                  hbaf
##                     5                     5                     3
##             Glucose_3            Glucose_6                 IL4_0
##                     3                     3                     3
##
## Node number 1: 70 observations,    complexity param=0.7407407
##   predicted class=1  expected loss=0.3857143  P(node) =1
##     class counts:    27    43
##    probabilities: 0.386 0.614
##   left son=2 (24 obs) right son=3 (46 obs)
```

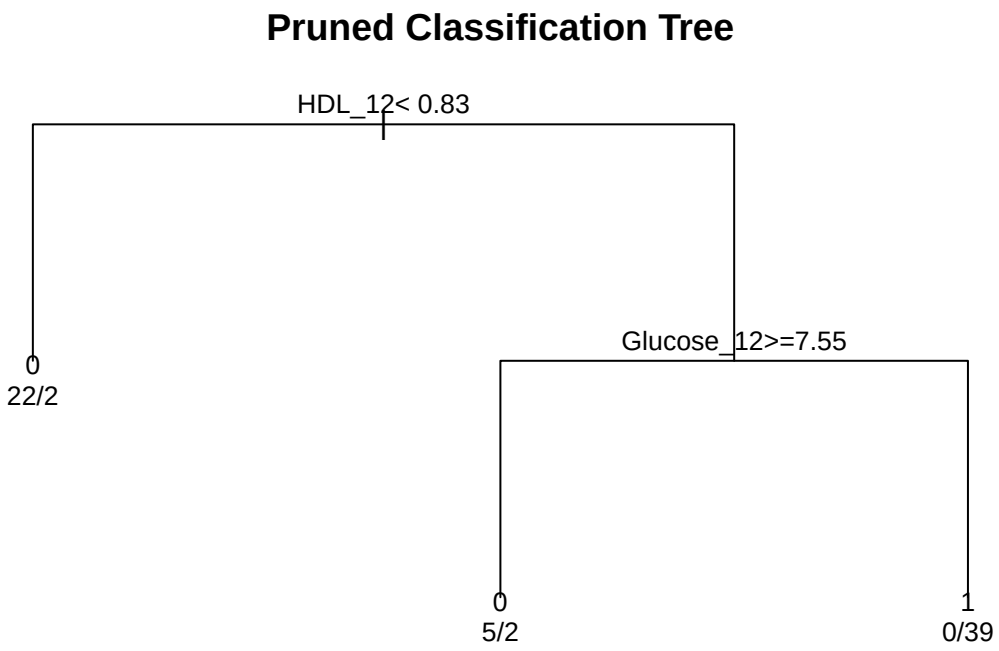
```
##   Primary splits:
##       HDL_12          < 0.83     to the left,  improve=20.59172, (0 missing)
##       BilirubinT_12   < 4.2      to the left,  improve=19.68123, (0 missing)
##       TotalProtein_12 < 66       to the left,  improve=19.68123, (0 missing)
##       UricAcid_12     < 97.5     to the left,  improve=19.68123, (0 missing)
##       Cholesterol_12  < 3.05     to the left,  improve=19.68123, (0 missing)
##   Surrogate splits:
##       SBP_Sitting_1_12      < 104.5    to the left,  agree=0.943, adj=0.833, (0 split)
##       Fibro_E_med_12        < 2.533333 to the left,  agree=0.943, adj=0.833, (0 split)
##       dfatmass120           < -0.55    to the right, agree=0.943, adj=0.833, (0 split)
##       Height_12             < 75       to the left,  agree=0.929, adj=0.792, (0 split)
##       Waistcircumference_12 < 40.95    to the left,  agree=0.929, adj=0.792, (0 split)
##
## Node number 2: 24 observations
##   predicted class=0  expected loss=0.08333333  P(node) =0.3428571
##     class counts:    22     2
##    probabilities: 0.917 0.083
##
## Node number 3: 46 observations,    complexity param=0.1111111
##   predicted class=1  expected loss=0.1086957  P(node) =0.6571429
##     class counts:     5    41
##    probabilities: 0.109 0.891
##   left son=6 (7 obs) right son=7 (39 obs)
##   Primary splits:
##       Glucose_12       < 7.55     to the right, improve=6.055901, (0 missing)
##       FBG_12           < 7.55     to the right, improve=6.055901, (0 missing)
##       Glucose_3        < 7.2      to the right, improve=4.468599, (0 missing)
##       average_sensor_0 < 201.1093 to the right, improve=3.535754, (0 missing)
##       estimated_a1c_0  < 8.65     to the right, improve=3.535754, (0 missing)
##   Surrogate splits:
##       FBG_12    < 7.55     to the right, agree=1.000, adj=1.000, (0 split)
##       hbaf      < 6.55     to the right, agree=0.957, adj=0.714, (0 split)
##       Glucose_3 < 6.95     to the right, agree=0.935, adj=0.571, (0 split)
##       Glucose_6 < 7.7      to the right, agree=0.935, adj=0.571, (0 split)
##       IL4_0     < 408.7    to the left,  agree=0.935, adj=0.571, (0 split)
##
## Node number 6: 7 observations
##   predicted class=0  expected loss=0.2857143  P(node) =0.1
##     class counts:     5     2
##    probabilities: 0.714 0.286
##
## Node number 7: 39 observations
##   predicted class=1  expected loss=0  P(node) =0.5571429
##     class counts:     0    39
##    probabilities: 0.000 1.000
```

```
{plot(fit1, uniform=TRUE, main="Classification Tree")
text(fit1, use.n=TRUE, xpd=TRUE, cex=.8)}
```




```
pfit<- prune(fit1, cp= fit1$cptable[which.min(fit1$cptable[,"xerror"]),"CP"])

# plot the pruned tree
{plot(pfit, uniform=TRUE, main="Pruned Classification Tree")
text(pfit, use.n=TRUE, xpd=TRUE, cex=.8)}
```



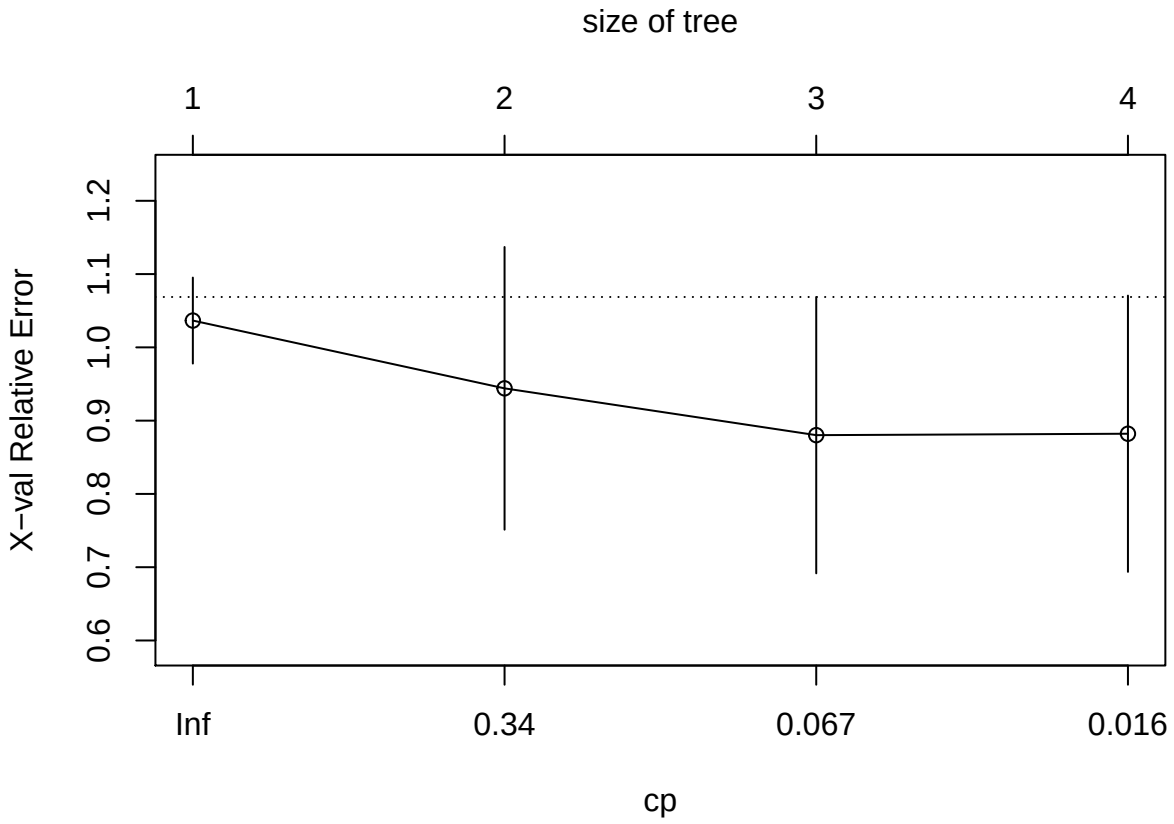
Regression

```
fit <- rpart(remission~., method="anova", data=data)

printcp(fit)
```

```
##
## Regression tree:
## rpart(formula = remission ~ ., data = data, method = "anova")
##
## Variables actually used in tree construction:
## [1] DBP_Standing_2_screening Glucose_12               HDL_12
##
## Root node error: 16.586/70 = 0.23694
##
## n= 70
##
##         CP nsplit rel error  xerror     xstd
## 1 0.620767      0   1.00000 1.03657 0.058676
## 2 0.182564      1   0.37923 0.94408 0.192886
## 3 0.024404      2   0.19667 0.88020 0.188556
## 4 0.010000      3   0.17227 0.88213 0.188487
```

```
plotcp(fit)
```




```
summary(fit)
```

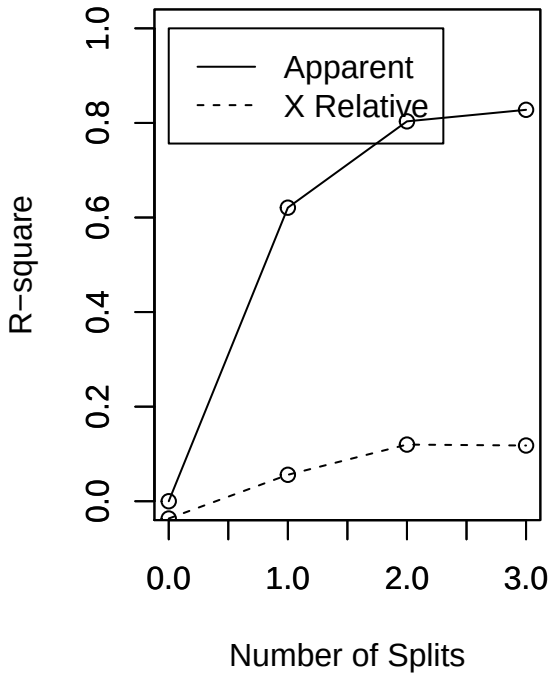
```
## Call:
## rpart(formula = remission ~ ., data = data, method = "anova")
##   n= 70
##
##           CP nsplit rel error    xerror       xstd
## 1 0.62076671      0 1.0000000 1.0365692 0.05867597
## 2 0.18256376      1 0.3792333 0.9440776 0.19288556
## 3 0.02440425      2 0.1966695 0.8802024 0.18855559
## 4 0.01000000      3 0.1722653 0.8821346 0.18848687
##
## Variable importance
##                     HDL_12               dfatmass120
##                         15                        13
##             Fibro_E_med_12           SBP_Sitting_1_12
##                         13                        13
##                  Height_12      Waistcircumference_12
##                         12                        12
##                     FBG_12                Glucose_12
##                          4                         4
##                       hbaf                 Glucose_3
##                          3                         3
##                  Glucose_6                     IL4_0
```

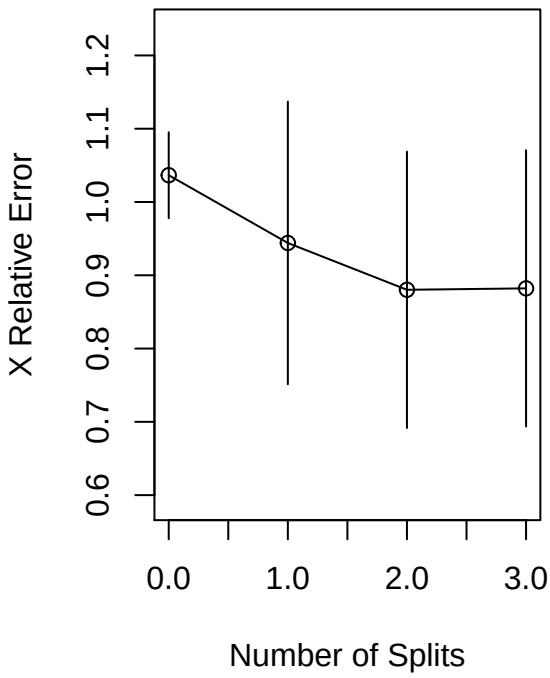
```
##                           3                           3
##   DBP_Standing_2_screening DBP_Standing_Avg_screening
##                           1                           1
##
## Node number 1: 70 observations,    complexity param=0.6207667
##   mean=1.614286, MSE=0.2369388
##   left son=2 (24 obs) right son=3 (46 obs)
##   Primary splits:
##       HDL_12          < 0.83     to the left,  improve=0.6207667, (0 missing)
##       BilirubinT_12   < 4.2      to the left,  improve=0.5933188, (0 missing)
##       TotalProtein_12 < 66       to the left,  improve=0.5933188, (0 missing)
##       UricAcid_12     < 97.5     to the left,  improve=0.5933188, (0 missing)
##       Cholesterol_12  < 3.05     to the left,  improve=0.5933188, (0 missing)
##   Surrogate splits:
##       SBP_Sitting_1_12      < 104.5    to the left,  agree=0.943, adj=0.833, (0 split)
##       Fibro_E_med_12        < 2.533333 to the left,  agree=0.943, adj=0.833, (0 split)
##       dfatmass120           < -0.55    to the right, agree=0.943, adj=0.833, (0 split)
##       Height_12             < 75       to the left,  agree=0.929, adj=0.792, (0 split)
##       Waistcircumference_12 < 40.95    to the left,  agree=0.929, adj=0.792, (0 split)
##
## Node number 2: 24 observations,    complexity param=0.02440425
##   mean=1.083333, MSE=0.07638889
##   left son=4 (17 obs) right son=5 (7 obs)
##   Primary splits:
##       DBP_Standing_2_screening < 76       to the right, improve=0.2207792, (0 missing)
##       UricAcid_0               < 281.5    to the right, improve=0.2207792, (0 missing)
##       day_night_sensor_ratio_0 < 2.25     to the right, improve=0.2207792, (0 missing)
##       IgA_0                    < 3212.7   to the right, improve=0.2207792, (0 missing)
##       LPPL_0                   < 637.65   to the right, improve=0.2207792, (0 missing)
##   Surrogate splits:
##       DBP_Standing_Avg_screening < 79.75    to the right, agree=0.958, adj=0.857, (0 split)
##       SBP_Sitting_1_screening    < 127.5    to the right, agree=0.917, adj=0.714, (0 split)
##       SBP_Sitting_2_screening    < 121.5    to the right, agree=0.917, adj=0.714, (0 split)
##       DBP_Standing_1_screening   < 78.5     to the right, agree=0.917, adj=0.714, (0 split)
##       SBP_Sitting_Avg_screening  < 125.5    to the right, agree=0.917, adj=0.714, (0 split)
##
## Node number 3: 46 observations,    complexity param=0.1825638
##   mean=1.891304, MSE=0.09688091
##   left son=6 (7 obs) right son=7 (39 obs)
##   Primary splits:
##       Glucose_12       < 7.55     to the right, improve=0.6794425, (0 missing)
##       FBG_12           < 7.55     to the right, improve=0.6794425, (0 missing)
##       Glucose_3        < 7.2      to the right, improve=0.5013550, (0 missing)
##       average_sensor_0 < 201.1093 to the right, improve=0.3966944, (0 missing)
##       estimated_a1c_0  < 8.65     to the right, improve=0.3966944, (0 missing)
##   Surrogate splits:
##       FBG_12    < 7.55     to the right, agree=1.000, adj=1.000, (0 split)
##       hbaf      < 6.55     to the right, agree=0.957, adj=0.714, (0 split)
##       Glucose_3 < 6.95     to the right, agree=0.935, adj=0.571, (0 split)
##       Glucose_6 < 7.7      to the right, agree=0.935, adj=0.571, (0 split)
##       IL4_0     < 408.7    to the left,  agree=0.935, adj=0.571, (0 split)
##
## Node number 4: 17 observations
##   mean=1, MSE=0
```

```
##
## Node number 5: 7 observations
##   mean=1.285714, MSE=0.2040816
##
## Node number 6: 7 observations
##   mean=1.285714, MSE=0.2040816
##
## Node number 7: 39 observations
##   mean=2, MSE=0
```

```
par(mfrow=c(1,2))
rsq.rpart(fit)
```

```
##
## Regression tree:
## rpart(formula = remission ~ ., data = data, method = "anova")
##
## Variables actually used in tree construction:
## [1] DBP_Standing_2_screening Glucose_12               HDL_12
##
## Root node error: 16.586/70 = 0.23694
##
## n= 70
##
##         CP nsplit rel error  xerror     xstd
## 1 0.620767      0   1.00000 1.03657 0.058676
## 2 0.182564      1   0.37923 0.94408 0.192886
## 3 0.024404      2   0.19667 0.88020 0.188556
## 4 0.010000      3   0.17227 0.88213 0.188487
```

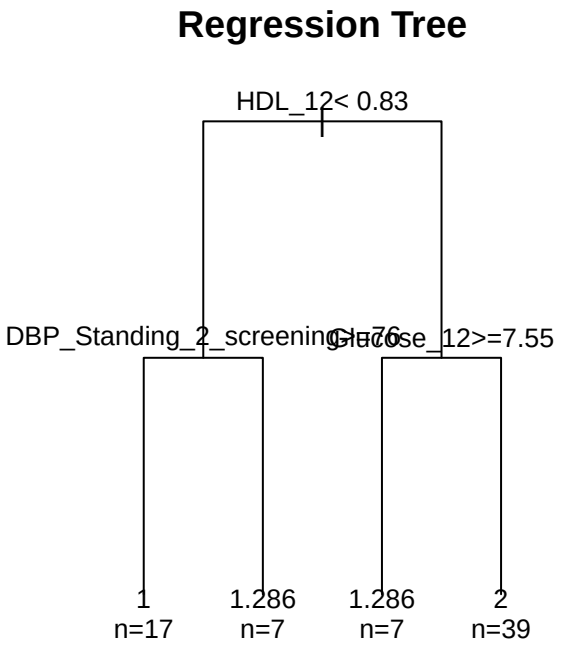


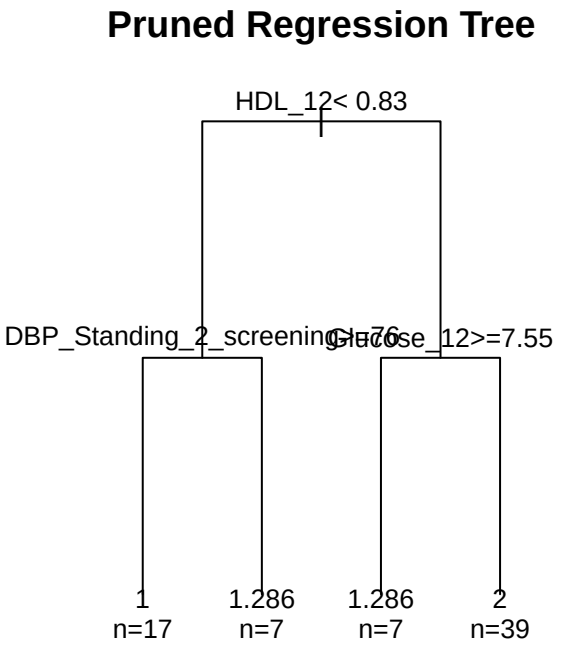



```
{plot(fit, uniform=TRUE, main="Regression Tree")
text(fit, use.n=TRUE, xpd=TRUE, cex=.8)}

pfit<- prune(fit, cp= fit1$cptable[which.min(fit1$cptable[,"xerror"]),"CP"])

# plot the pruned tree
{plot(pfit, uniform=TRUE, main="Pruned Regression Tree")
text(pfit, use.n=TRUE, xpd=TRUE, cex=.8)}
```





SVM

Multiple Linear Regression

```
fit<- lm(remission~., data=data)
```

```
## Warning in model.response(mf, "numeric"): using type = "numeric" with a factor
## response will be ignored
```

```
## Warning in Ops.factor(y, z$residuals): '-' not meaningful for factors
```

```
summ<-summary(fit)
```

```
## Warning in Ops.factor(r, 2): '^' not meaningful for factors
```

```
#summ
coeffs<-coefficients(fit)
coeffsord <- coeffs[order(-coeffs)]
#coeffsord
coeffsord<-na.omit(coeffsord)
data.frame(coeffsord)
```

```
##                                coeffsord
## (Intercept)                1907.5132020
## TANITAFFM_0                 225.0528983
## TANITAFFM_screening          63.3263269
## TANITAFatMass_0              57.2404458
## TANITABMR_0                  26.2820557
```

```
## TANITATBW_screening            21.0277334
## TANITABMI_0                    20.9776533
## TANITABMR_screening            17.8787612
## Mother_Cancer                  16.2537069
## Father_Hypertension            14.0111450
## TANITAIdealBodyWeight_screen   12.9576645
## Mother_CVD                     10.2340697
## TANITAVisceralFatRating_scre   10.2109495
## ExSmoker                        9.7999856
## CurrentSmoker_Cigarettes        8.4651516
## Mother_Hypertension             7.7865994
## TANITAWeight_screening          7.3327687
## Mother_Obesity                  3.7944617
## Dates_Quantity                  3.4093357
## TANITAMetabolicAge_screening    2.6693243
## Father_Obesity                  2.2123729
## TimeToEat_Breakfast             1.7811497
## DBP_Sitting_2_screening         1.7394594
## Neckcircumference_0             1.4402402
## HR_Standing_1_screening         1.3647995
## Waistcircumference_screening    1.1205229
## Father_CVD                      0.8665498
## HR_Sitting_3_screening          0.8636234
## LatestAlbCr                     0.8567369
## SBP_Sitting_1_screening         0.7176876
## DBP_Standing_1_screening        0.6517275
## Takeaway_PerWeek                0.6365369
## Soda_PerWeek                    0.6018107
## Dates_PerWeek                   0.3031706
## SBP_Sitting_3_screening         0.2881038
## DBP_Standing_2_screening        0.2401073
## Coffee_PerWeek                  0.1561715
## Tea_PerWeek                     0.1178284
## TANITAImpedance_screening       0.1032210
## TimeToEat_Lunch                -0.2557238
## SBP_Standing_1_screening       -0.3118365
## Waistcircumference_0           -0.4571104
## DBP_Sitting_3_screening        -0.4937112
## SBP_Sitting_2_screening        -0.5099673
## SBP_Sitting_Avg_screening      -0.5788230
## SBP_Standing_2_screening       -0.5878252
## HR_Sitting_2_screening         -0.6677836
## TimeToEat_Dinner               -0.8034717
## Neckcircumference_screening    -0.8650100
## HR_Sitting_1_screening         -0.8715946
## DBP_Sitting_1_screening        -0.9539603
## Juice_PerWeek                  -0.9763528
## HR_Standing_2_screening        -1.2253485
## Hipcircumference_screening     -1.2566155
## TANITAMetabolicAge_0           -1.8676782
## TANITAFatMass_screening        -3.8747837
## Height_0                       -4.6271985
## CurrentSmoker_Shisha           -5.9791696
## Father_Diabetes                -6.0845759
```

```
## Mother_Diabetes                -6.9235629
## TANITAVisceralFatRating_0     -11.2919537
## Height_screening              -11.5902615
## TANITATBW_0                   -21.0509717
## Father_Cancer                 -24.5504862
## TANITABMI_screening           -36.5704339
## TANITAWeight_0                -56.0416969
## BK                            -74.0482636
## TANITAMuscleMass_screening    -89.3995749
## EQ                           -110.4355206
## TANITAMuscleMass_0           -165.0274222
```