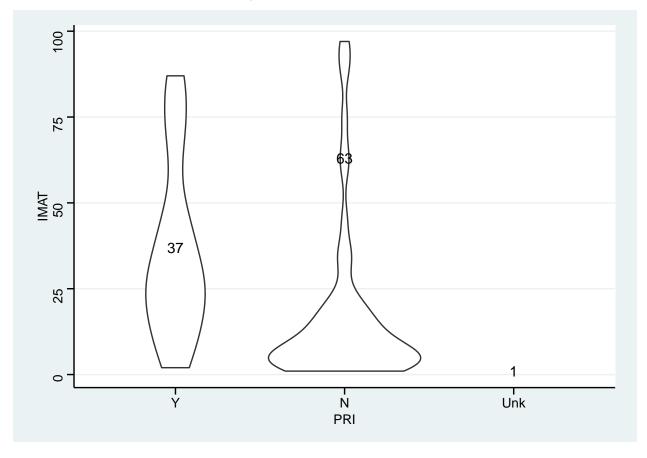
BEIPIR

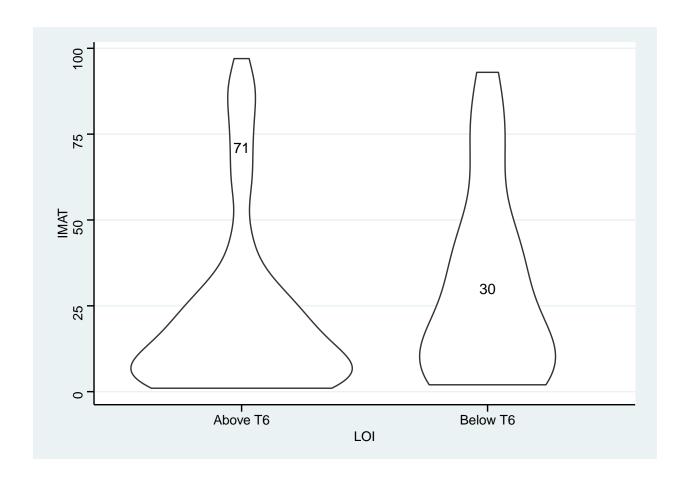
Dr. Jiayang Sun, Gabriel Brehm

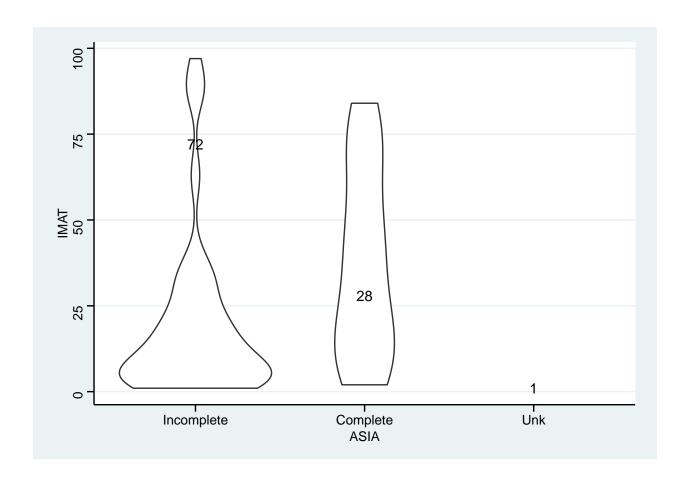
2023-02-22

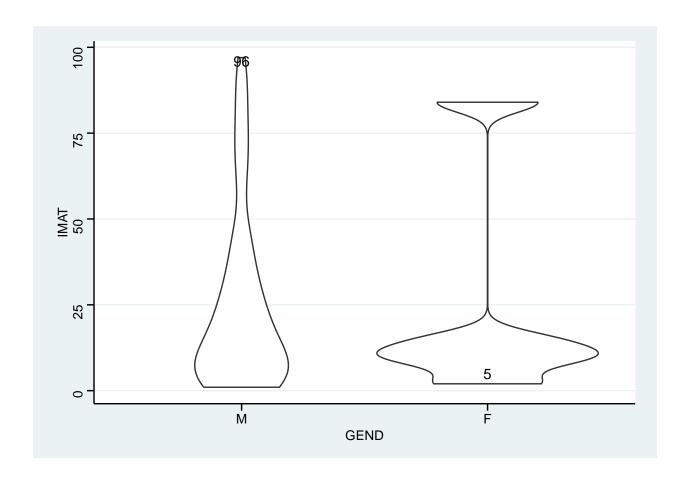
Visualizations

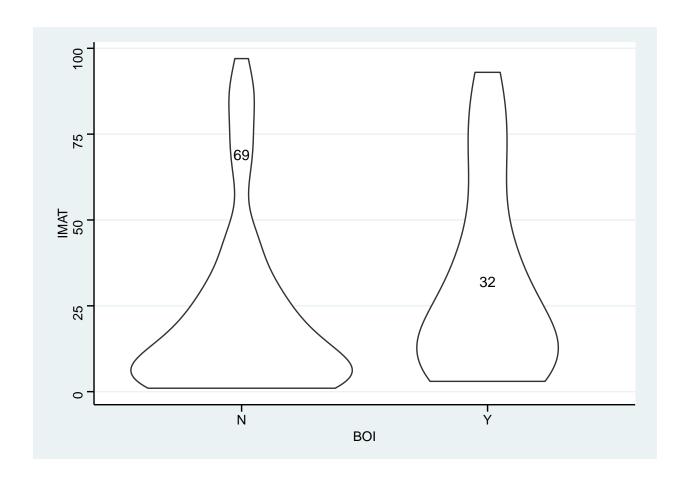
NOTE: 1 ALBUMIN VALUE IS AT 999, NEED TO UNDERSTAND THAT

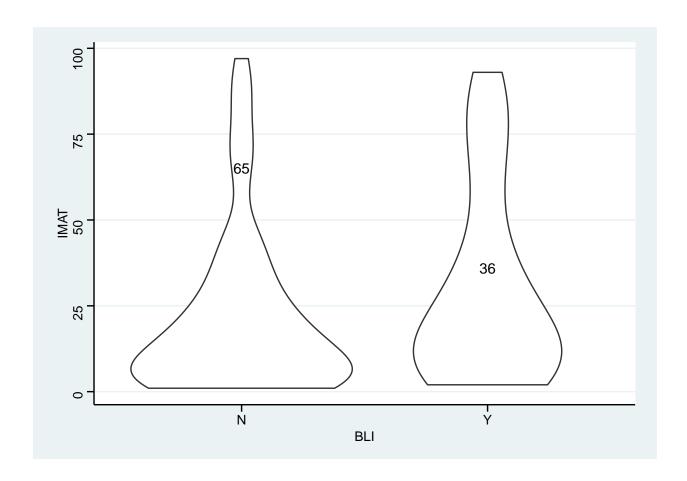


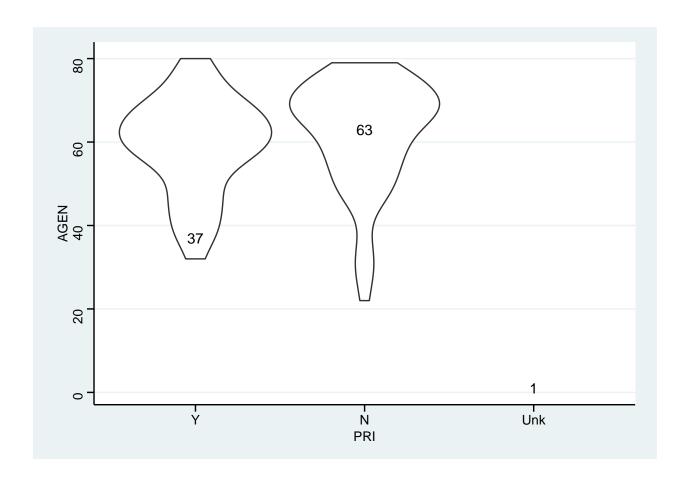


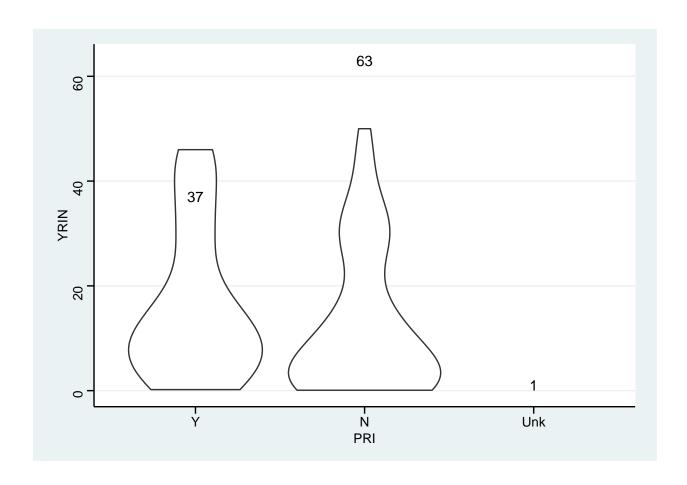


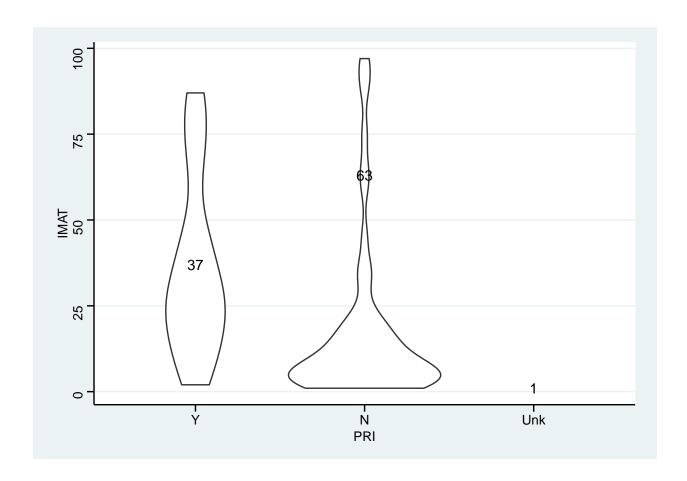


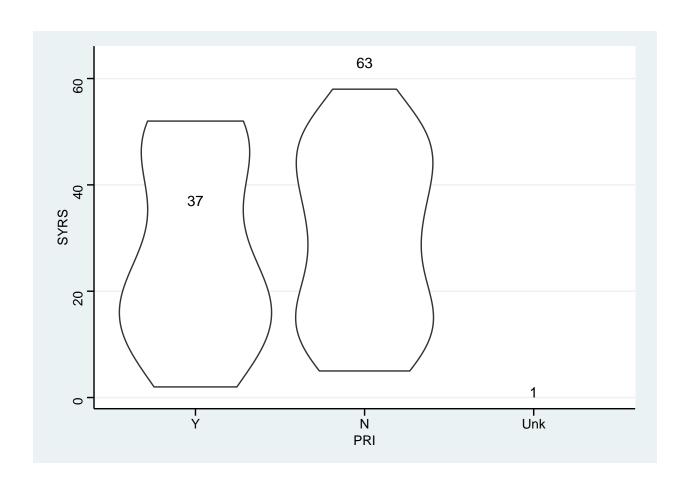


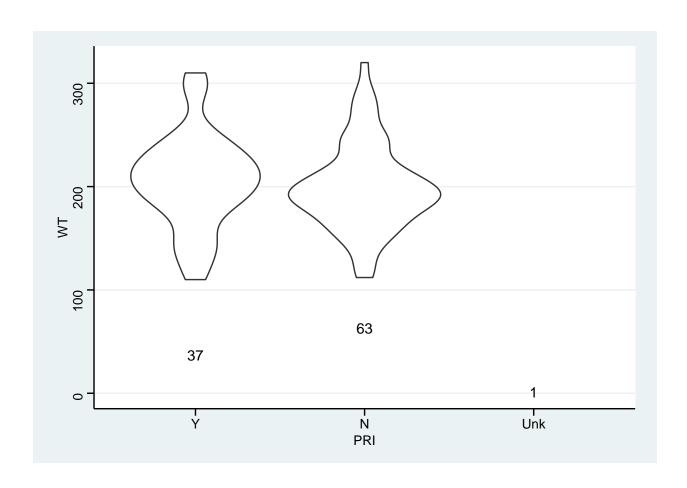


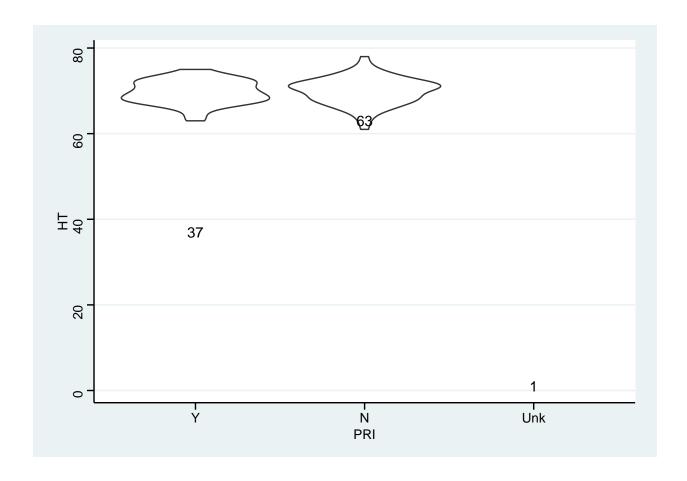


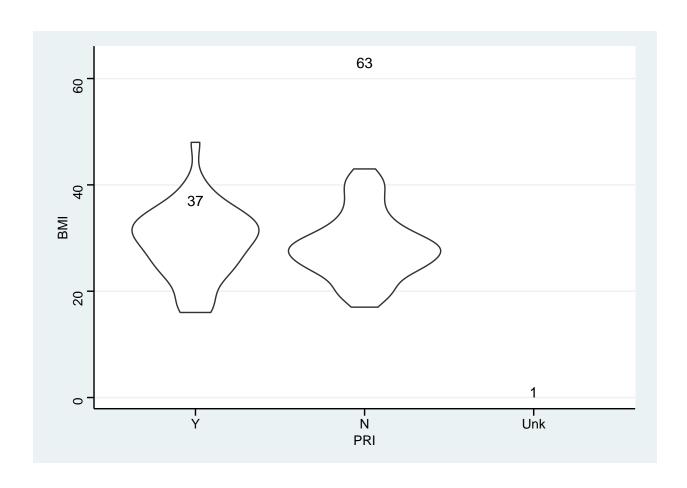


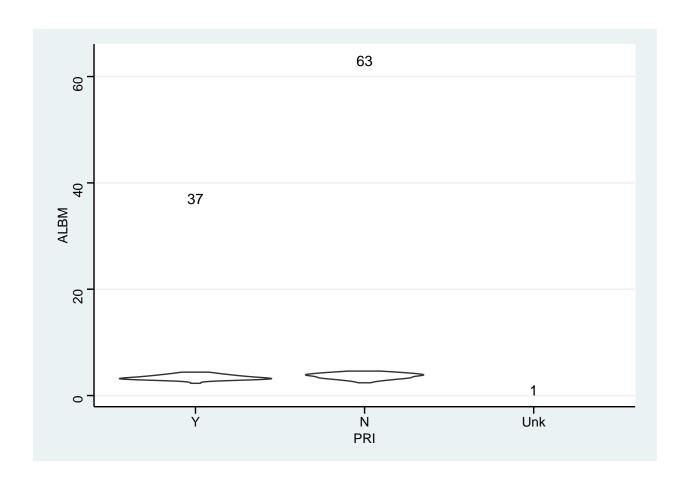


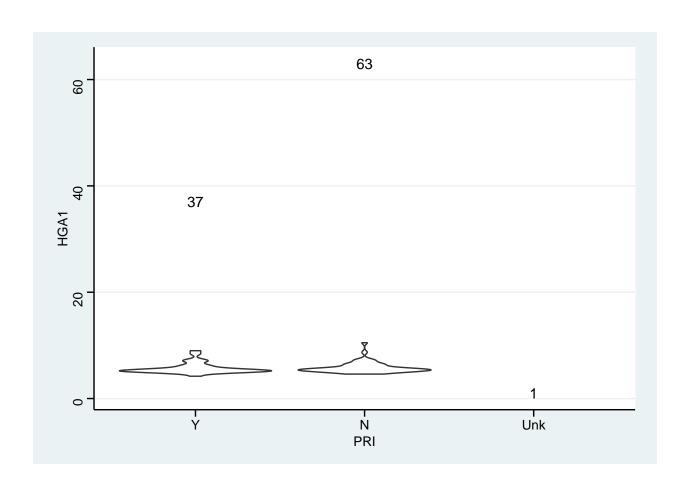


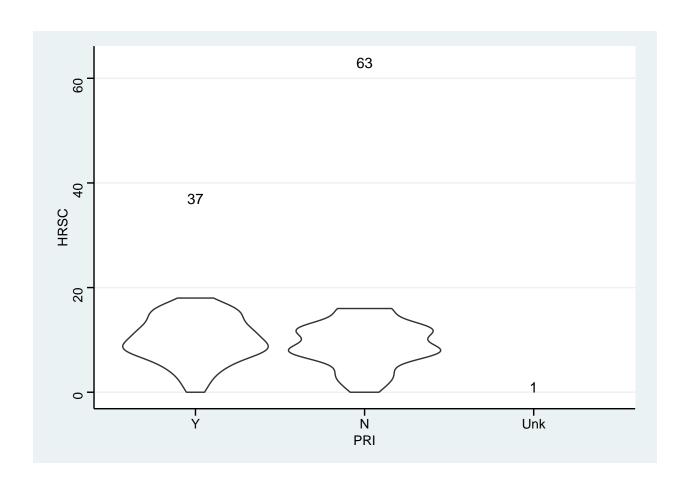


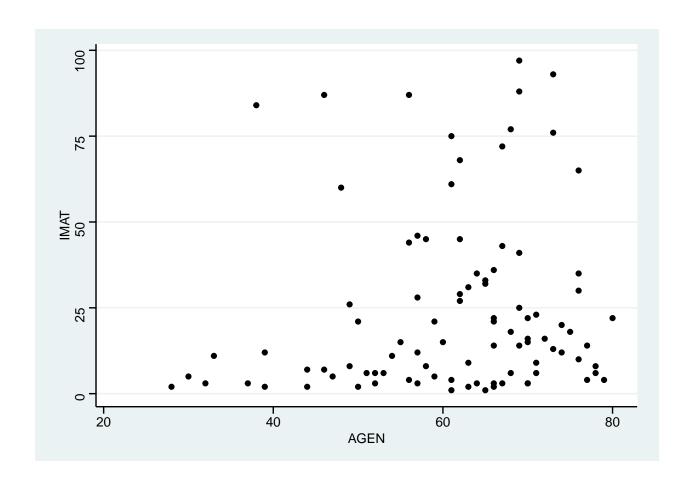


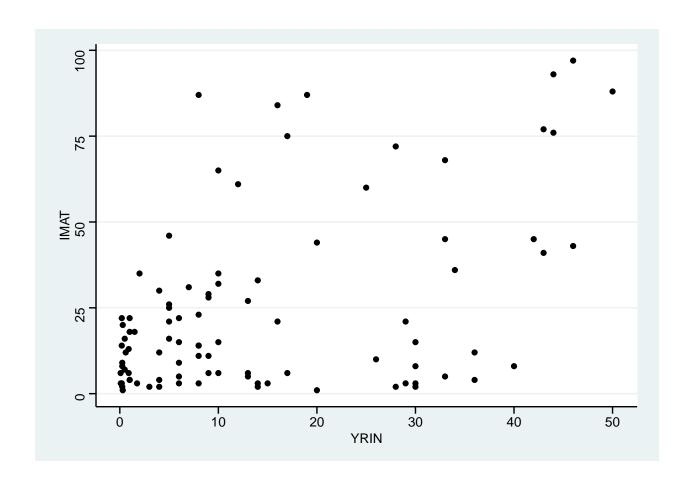


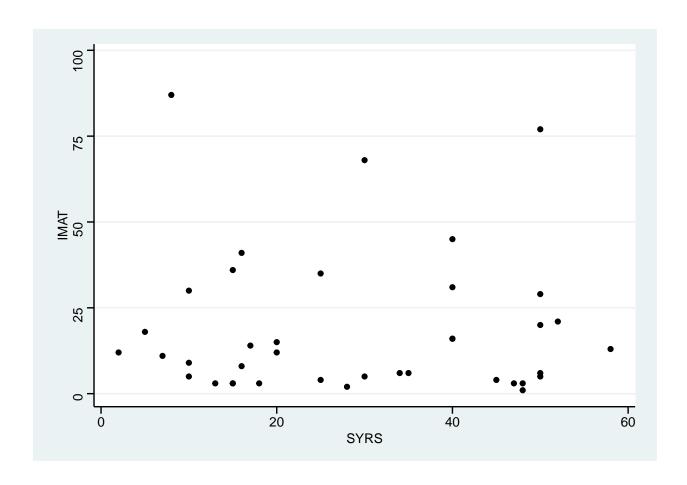


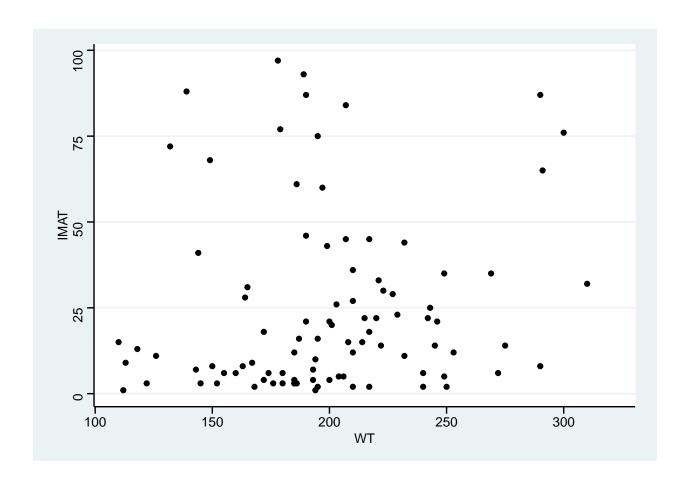


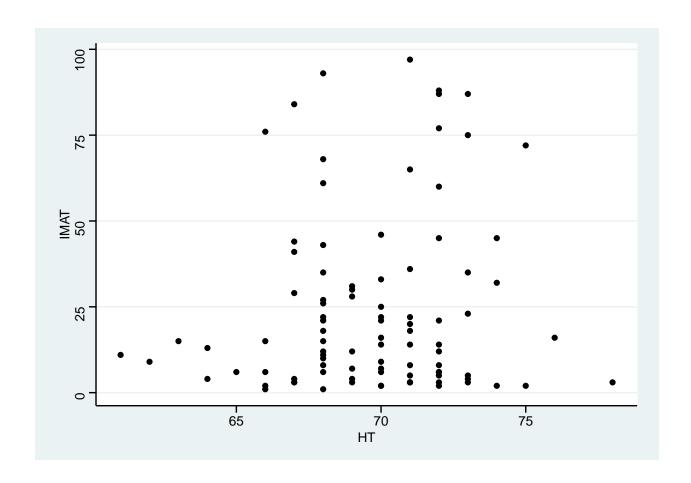


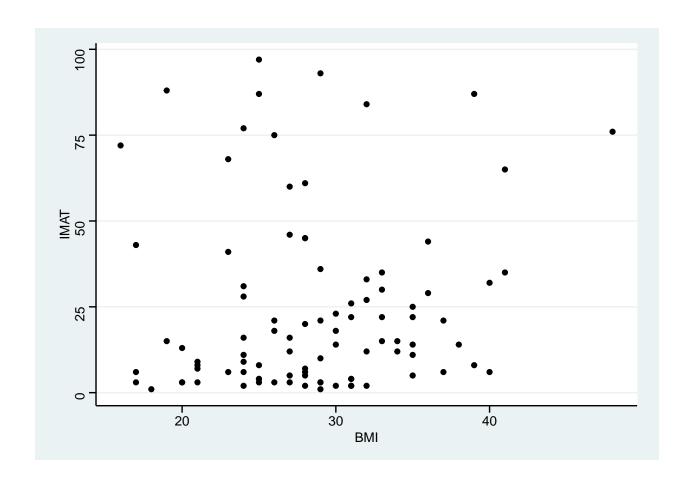


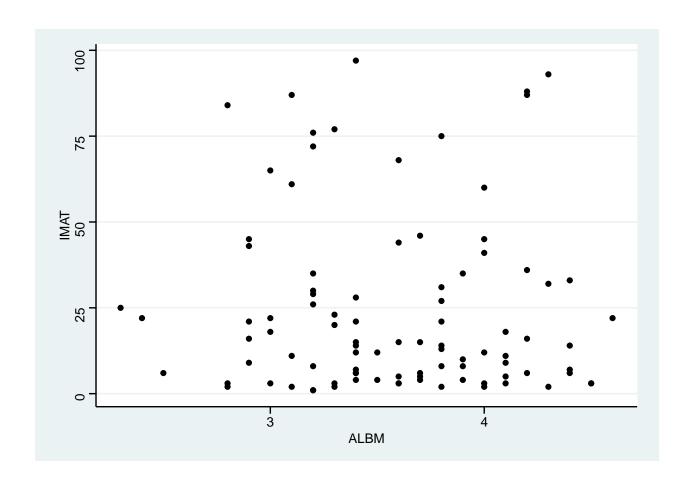


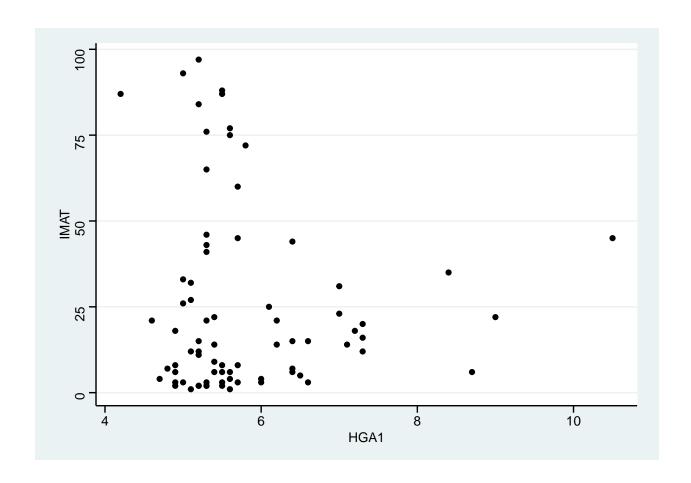


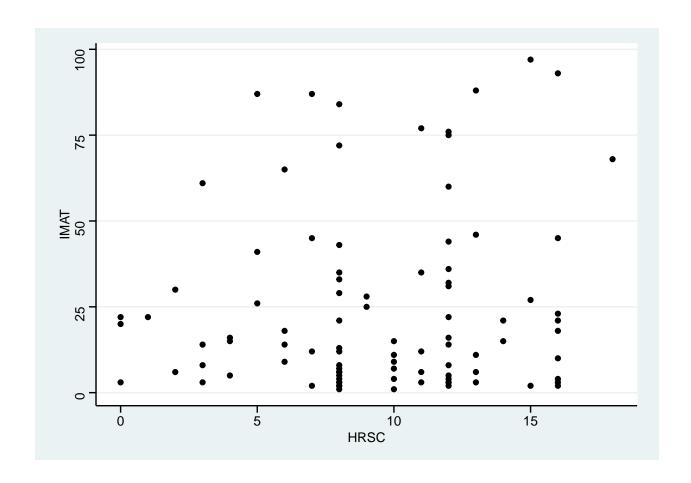


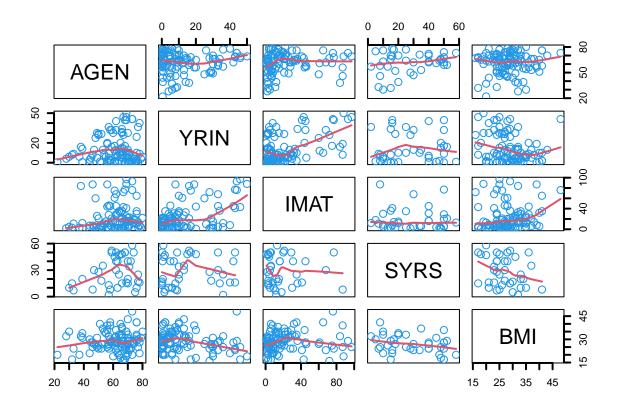












Numerical EDA

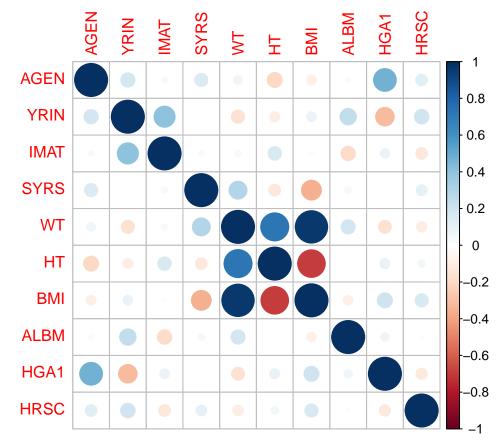
Try looking at distances between points (if possible), correlations, partial correlations

[1] "Summary"

```
AGEN
                          YRIN
                                      RACE
                                                     ETHN
                                                                            LOI
##
                                                              GEND
            :22.0
                            : 0.08
                                      Ca:77
                                              Not Hs/L:83
                                                             M:96
                                                                     Above T6:71
##
    Min.
                    Min.
    1st Qu.:55.0
                    1st Qu.: 2.75
                                      AA:23
                                              unk
                                                       :15
                                                             F: 5
                                                                     Below T6:30
##
    Median:63.0
                    Median: 9.00
##
                                      0:1
                                              HS/L
                                                       : 1
##
    Mean
            :60.9
                    Mean
                            :14.06
                                              Hs/L
                                                       : 2
##
    3rd Qu.:70.0
                    3rd Qu.:25.25
            :80.0
                            :50.00
    Max.
                    Max.
##
##
                    NA's
                            :1
##
                      PRI
                                     IMAT
                                                    WCTP
                                                               CUTP
                                                                           BED
             ASIA
##
    Incomplete:72
                     Y
                        :37
                               Min.
                                       : 1.00
                                                PWc
                                                      :42
                                                             ACu :37
                                                                       B0th : 6
##
    Complete
               :28
                     N
                        :63
                               1st Qu.: 5.25
                                                MWc
                                                      :31
                                                            FCu :39
                                                                       BHPTL:52
##
    Unk
                               Median :14.50
                                                            LCu : 3
                                                                       BSTD:43
               : 1
                     Unk: 1
                                                TRWc :10
##
                               Mean
                                       :24.39
                                                 AmnWC:17
                                                             NoCu:15
##
                               3rd Qu.:32.75
                                                             Acu: 0
                                                Mwc
                                                    : 0
##
                               Max.
                                       :97.00
                                                OWc
                                                     : 1
                                                            Fcu: 0
##
                               NA's
                                       :7
                                                             OCu : 7
##
     MATT
              NUTI
                      BOI
                              BLI
                                      VASC
                                             RESP
                                                     PNEU
                                                                DIAB
                                                                        DEPR
                                                                                ANXI
                                             Y:40
              L3:92
                      N:69
                              N:65
                                      Y:33
                                                     N:99
                                                                        N:62
                                                                                N:71
##
    AM :36
                                                                  :64
                                                            No
```

```
AFM:17
            G3: 9 Y:32 Y:36
                                 N:68
                                         N:61
                                                Y: 2
                                                        unk :10
                                                                   Y:39
                                                                         Y:30
##
   OM:15
                                                        Cont.:22
   SFM:33
##
                                                        Pre : 5
##
##
##
                     ALCO
                                  NODR
                                           DRUG
                                                                  SYRS
##
    PAIN
             SLEP
                                                     SMOK
   Y:58
                                                             Min. : 2.0
##
            N :36
                     Y:47
                            Moderate:11
                                           N:86
                                                  Sx10+:25
##
   unk:29
            unk:29
                     N:54
                            None
                                     :56
                                           Y:15
                                                  Sx10-:24
                                                             1st Qu.:15.0
                                                       :36
##
   N/A: 1
            Y:35
                            Light
                                     :30
                                                  NS
                                                             Median:26.5
   N:13
            N/A: 1
                            Heavy
                                     : 4
                                                  CS
                                                       :14
                                                             Mean
                                                                   :28.5
##
                                                  SS
                                                       : 2
                                                             3rd Qu.:45.5
##
                                                             Max.
                                                                    :58.0
##
                                                             NA's
                                                                    :61
##
                         HT
                                         BMI
                                                         ALBM
         WT
##
          :110.0
                           :61.00
                                           :16.00
                                                   Min.
                                                          :2.300
   Min.
                   Min.
                                   Min.
##
   1st Qu.:176.0
                    1st Qu.:68.00
                                    1st Qu.:24.00
                                                    1st Qu.:3.200
   Median :197.0
                   Median :70.00
                                   Median :28.00
                                                    Median :3.600
                                                          :3.581
##
   Mean
         :200.7
                   Mean
                          :69.77
                                   Mean
                                         :28.76
                                                    Mean
##
   3rd Qu.:223.0
                   3rd Qu.:72.00
                                   3rd Qu.:32.00
                                                    3rd Qu.:4.000
##
   Max. :320.0
                   Max.
                          :78.00
                                   Max. :48.00
                                                    Max.
                                                          :4.600
##
##
        HGA1
                             SHC
                                       USHC
                                               PRAH
                    LIVS
                                                             PRFQ
   Min. : 4.200
                    L2:59
                            Y:46
##
                                      Y:45
                                               N:13
                                                        unk
                                                               :32
##
   1st Qu.: 5.200
                     L4:11
                            N:54
                                      N:55
                                              Y:87
                                                        15
                                                               :30
   Median : 5.400
                    L3: 6
                            unk: 1
                                      unk: 1
                                              unk: 1
                                                        N/A
                                                               :10
##
   Mean : 5.772
                    L1:25
                                                        120
                                                               : 8
   3rd Qu.: 6.125
##
                                                        60
                                                               : 8
##
         :10.500
                                                        30
                                                               : 5
   Max.
##
   NA's
          :21
                                                        (Other): 8
##
        HRSC
                    EMPL
                            MARS
                                     EDUC
##
   Min.
          : 0.00
                    E5:48
                           M1 :45
                                     S2:31
   1st Qu.: 7.00
                    E6:45
                           M2 : 8
                                     S3:36
   Median: 9.00
                                     S5: 9
##
                    E4: 1
                           M3 :15
##
   Mean : 9.38
                    E2: 0
                           M5 : 3
                                     S6: 6
##
   3rd Qu.:12.00
                    E1: 7
                           M4 :29
                                     S4:17
##
   Max.
         :18.00
                            unk: 1
                                     S1: 1
##
   NA's
           :1
                                     S7: 1
## [1] "Partial Correlations"
##
               AGEN
                            YRIN
                                       TAMI
                                                     SYRS
                                                                   WT
## AGEN 1.00000000 0.184616727 -0.03008723 0.157895047 0.06813894 -0.20592684
        0.18461673 1.000000000 0.40773629 -0.006934976 -0.15801231 -0.09004768
## YRIN
## IMAT -0.03008723 0.407736293 1.00000000 0.031243320 0.03570838 0.16440463
## SYRS 0.15789505 -0.006934976 0.03124332 1.000000000 0.29293948 -0.12546153
## WT
        0.06813894 -0.158012311 0.03570838 0.292939476
                                                          1.00000000
                                                                       0.72026984
## HT
        -0.20592684 -0.090047680 0.16440463 -0.125461532 0.72026984
                                                                      1.00000000
## BMI -0.08819931 0.087306196 0.01670089 -0.358702364 0.96040940 -0.69740189
## ALBM 0.02716884 0.244882250 -0.18784317 0.044420695 0.18333689 0.00084650
        0.47437001 -0.314211410 0.08255767 -0.003602310 -0.15301354
                                                                       0.09246715
       0.12637946 0.192157549 -0.12508961 0.106878221 -0.09861580 0.05095924
                           ALBM
               BMI
                                       HGA1
## AGEN -0.08819931 0.02716884 0.47437001 0.12637946
```

```
0.08730620
                     0.24488225 -0.31421141 0.19215755
        0.01670089 -0.18784317
## IMAT
                                0.08255767 -0.12508961
## SYRS -0.35870236
                     0.04442069 -0.00360231
                                             0.10687822
## WT
         0.96040940
                     0.18333689 -0.15301354 -0.09861580
## HT
        -0.69740189
                     0.00084650
                                 0.09246715
                                             0.05095924
         1.00000000 -0.08099748
                                 0.20623646
## BMI
                                            0.16022158
## ALBM -0.08099748
                     1.00000000
                                 0.06365532 -0.01287487
                     0.06365532 1.00000000 -0.11560858
## HGA1
        0.20623646
## HRSC
        0.16022158 -0.01287487 -0.11560858
                                             1.00000000
```



A slight tail indicates some potential signal in the noise, though it's not completely clear that there is very much signal here.

Some First Models

Just IMAT

```
## [1] "Guesses from EDA"

##
## Call:
## lm(formula = log(IMAT) ~ log(YRIN) + log(AGEN) + log(HGA1) +
## ETHN + LOI + ASIA + PRI + BED + PRAH, data = visit_one)
##
## Residuals:
## Min 1Q Median 3Q Max
```

```
## -2.1999 -0.5472 -0.0483 0.4049 2.4873
##
## Coefficients:
               Estimate Std. Error t value Pr(>|t|)
##
## (Intercept) -6.02956
                           2.41029
                                   -2.502 0.01497 *
## log(YRIN)
                0.09967
                           0.07487
                                     1.331 0.18789
## log(AGEN)
                1.91410
                           0.59412
                                     3.222 0.00202 **
## log(HGA1)
                0.51749
                           0.77222
                                     0.670 0.50522
## ETHNunk
                0.78490
                           0.34670
                                    2.264 0.02703 *
## ETHNHs/L
                0.45950
                           1.07755
                                    0.426 0.67125
## LOIBelow T6
                0.42284
                           0.25958
                                    1.629 0.10832
                                    1.731 0.08840
## ASIAComplete 0.52336
                           0.30240
               -0.74072
                           0.29382 -2.521 0.01424 *
## PRIN
## BEDBHPTL
                0.05329
                           0.45699
                                    0.117 0.90754
## BEDBSTD
                           0.46951 -0.465 0.64369
                -0.21822
## PRAHY
                -0.26337
                           0.33906 -0.777 0.44021
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 0.9877 on 63 degrees of freedom
     (26 observations deleted due to missingness)
## Multiple R-squared: 0.4633, Adjusted R-squared: 0.3696
## F-statistic: 4.944 on 11 and 63 DF, p-value: 1.743e-05
## [1] "Refining a bit"
##
## Call:
## lm(formula = log(IMAT) ~ log(YRIN) + log(AGEN) + ETHN + LOI +
       ASIA + PRI, data = visit_one)
##
## Residuals:
                1Q Median
      Min
                               3Q
                                      Max
## -2.1974 -0.4933 0.0000 0.4505 2.2674
##
## Coefficients:
##
               Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                -5.4685
                            1.9478 -2.808 0.006221 **
                                    1.908 0.059850
                 0.1202
## log(YRIN)
                            0.0630
## log(AGEN)
                 1.9373
                            0.4679
                                    4.140 8.29e-05 ***
## ETHNunk
                 0.6691
                            0.2908
                                    2.301 0.023900 *
## ETHNHs/L
                 0.6766
                            0.7047
                                     0.960 0.339790
## LOIBelow T6
                 0.2530
                            0.2267
                                     1.116 0.267650
## ASIAComplete
                 0.6720
                            0.2611
                                     2.574 0.011825 *
## ASIAUnk
                 1.2242
                            0.9598
                                    1.276 0.205669
## PRIN
                            0.2275 -3.434 0.000932 ***
                -0.7812
## PRIUnk
                -0.8290
                            0.9850 -0.842 0.402395
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9435 on 83 degrees of freedom
     (8 observations deleted due to missingness)
## Multiple R-squared: 0.4385, Adjusted R-squared: 0.3776
## F-statistic: 7.202 on 9 and 83 DF, p-value: 1.172e-07
```

Just PRI

```
##
## Call:
## glm(formula = PRI ~ log(IMAT) + log(YRIN) + log(AGEN) + log(HGA1) +
       LOI + ASIA + BED + MATT + WCTP + CUTP + SHC, family = binomial,
##
       data = logit_data)
##
## Deviance Residuals:
       Min
                      Median
                                           Max
                 1Q
## -2.1675 -0.4713
                      0.1149
                               0.5916
                                         2.5201
##
## Coefficients:
                  Estimate Std. Error z value Pr(>|z|)
## (Intercept)
                  -6.93237
                              8.08116 -0.858
                                                 0.3910
## log(IMAT)
                  -1.32989
                              0.53366 - 2.492
                                                 0.0127 *
## log(YRIN)
                  -0.02436
                              0.26265
                                      -0.093
                                                 0.9261
## log(AGEN)
                   2.21872
                              2.13581
                                        1.039
                                                 0.2989
## log(HGA1)
                   1.54514
                              2.22930
                                        0.693
                                                 0.4882
## LOIBelow T6
                  -0.60262
                              1.10354 -0.546
                                                0.5850
## ASIAComplete
                  -1.50586
                              0.98610 - 1.527
                                                 0.1267
## BEDBHPTL
                  -0.44940
                              1.96088 -0.229
                                                 0.8187
## BEDBSTD
                   1.74349
                              2.04879
                                        0.851
                                                 0.3948
## MATTAFM
                  -1.71544
                              1.30022 -1.319
                                                 0.1871
## MATTOM
                  -0.78045
                              1.20644
                                       -0.647
                                                 0.5177
## MATTSFM
                  -1.38371
                              1.36188
                                       -1.016
                                                0.3096
## WCTPMWc
                  -1.04672
                              1.12374
                                       -0.931
                                                 0.3516
## WCTPTRWc
                  -2.71441
                              1.62180 -1.674
                                                0.0942
## WCTPAmnWC
                  14.08839 2227.05191
                                        0.006
                                                0.9950
## WCTPOWc
                  12.73647 3956.18073
                                        0.003
                                                 0.9974
## CUTPFCu
                   1.88348
                              1.06203
                                        1.773
                                                 0.0762 .
## CUTPLCu
                              1.80021
                                        0.597
                   1.07530
                                                 0.5503
## CUTPNoCu
                 -15.81301 2227.05176
                                      -0.007
                                                 0.9943
## CUTPOCu
                  -1.55383
                              1.80975
                                       -0.859
                                                 0.3906
## SHCN
                   1.35002
                              1.45045
                                        0.931
                                                 0.3520
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
## (Dispersion parameter for binomial family taken to be 1)
##
##
       Null deviance: 100.952 on 74 degrees of freedom
## Residual deviance: 53.793
                               on 54 degrees of freedom
     (25 observations deleted due to missingness)
## AIC: 95.793
## Number of Fisher Scoring iterations: 16
##
## glm(formula = PRI ~ log(IMAT) + log(YRIN) + log(AGEN) + LOI +
##
       ASIA + WCTP + CUTP + SHC, family = binomial, data = logit_data)
##
## Deviance Residuals:
##
       Min
                 1Q
                      Median
                                   3Q
                                           Max
```

```
## -2.2837 -0.6075
                      0.2253
                               0.6135
                                        2.6357
##
## Coefficients:
##
                  Estimate Std. Error z value Pr(>|z|)
## (Intercept)
                  -2.04510
                              6.20705
                                      -0.329 0.74179
## log(IMAT)
                                      -2.743 0.00608 **
                  -0.94617
                              0.34488
## log(YRIN)
                  -0.13694
                              0.20919
                                       -0.655 0.51271
## log(AGEN)
                   1.10055
                              1.55387
                                        0.708 0.47878
## LOIBelow T6
                   0.06437
                              0.74058
                                        0.087
                                               0.93073
## ASIAComplete
                  -1.34262
                              0.77310
                                      -1.737 0.08245
## ASIAUnk
                  15.85265 3956.18050
                                        0.004 0.99680
## WCTPMWc
                                        0.384 0.70101
                  0.30018
                              0.78179
## WCTPTRWc
                  -1.93201
                              1.26930
                                       -1.522 0.12798
## WCTPAmnWC
                  16.19406 2384.18757
                                        0.007 0.99458
## WCTPOWc
                                        0.004 0.99694
                  15.17582 3956.18045
## CUTPFCu
                   1.75628
                              0.72437
                                        2.425
                                              0.01533 *
## CUTPLCu
                   1.68715
                              1.62081
                                        1.041 0.29791
## CUTPNoCu
                 -14.90458 2384.18770
                                       -0.006 0.99501
## CUTPOCu
                                        0.502 0.61559
                  0.54786
                              1.09113
## SHCN
                   0.78276
                              0.81873
                                        0.956 0.33904
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
##
  (Dispersion parameter for binomial family taken to be 1)
##
##
       Null deviance: 123.156 on 91 degrees of freedom
## Residual deviance: 74.544 on 76 degrees of freedom
     (8 observations deleted due to missingness)
## AIC: 106.54
##
## Number of Fisher Scoring iterations: 16
```

Multivariate Model

PRI & log(IMAT) vs. potential explainers, just seeing how this looks

```
## Response PRI :
##
## Call:
## lm(formula = PRI ~ log(YRIN) + log(AGEN) + log(HGA1) + LOI +
       ASIA + BED + MATT + WCTP + CUTP + SHC + PRFQ, data = visit_one)
##
##
## Residuals:
##
       Min
                1Q Median
                                3Q
                                        Max
## -1.0080 -0.2160 0.0000 0.2841
                                   0.8683
##
## Coefficients: (1 not defined because of singularities)
##
                 Estimate Std. Error t value Pr(>|t|)
                -0.260523
                            1.217758
                                      -0.214
                                                0.8315
## (Intercept)
                            0.034902 -0.885
                                                0.3804
## log(YRIN)
                -0.030896
## log(AGEN)
                 0.229741
                            0.287531
                                       0.799
                                                0.4281
## log(HGA1)
                            0.401346
                                       0.964
                                                0.3398
                 0.386886
## LOIBelow T6 -0.187365
                            0.138033 -1.357
                                                0.1809
```

```
## ASIAComplete -0.340382
                            0.152840 -2.227
                                                0.0306 *
## BEDBHPTL
                -0.022394
                            0.220138
                                      -0.102
                                                0.9194
                 0.092174
## BEDBSTD
                            0.226571
                                        0.407
                                                0.6859
## MATTAFM
                -0.094046
                            0.162464
                                       -0.579
                                                0.5653
## MATTOM
                -0.123420
                            0.209669
                                       -0.589
                                                0.5588
## MATTSFM
                 0.014253
                            0.163278
                                        0.087
                                                0.9308
## WCTPMWc
                -0.149151
                            0.171015
                                       -0.872
                                                0.3874
## WCTPTRWc
                -0.185563
                            0.210525
                                       -0.881
                                                0.3824
## WCTPAmnWC
                -0.150317
                            0.380330
                                       -0.395
                                                0.6944
## WCTPOWc
                 0.066259
                            0.516122
                                        0.128
                                                0.8984
## CUTPFCu
                 0.248008
                            0.145115
                                        1.709
                                                0.0938
## CUTPLCu
                -0.006155
                            0.342741
                                       -0.018
                                                0.9857
## CUTPNoCu
                -0.013490
                            0.370212
                                       -0.036
                                                0.9711
                            0.255499
## CUTPOCu
                 0.034058
                                        0.133
                                                0.8945
## SHCN
                            0.207973
                 0.331783
                                        1.595
                                                0.1171
## PRFQunk
                 0.291746
                            0.190734
                                        1.530
                                                0.1325
                 0.030454
## PRFQ120
                            0.285737
                                                0.9156
                                        0.107
## PRFQ15
                 0.417057
                            0.216014
                                                0.0593
                                        1.931
                            0.437134
## PRFQ30
                 0.480133
                                        1.098
                                                0.2774
## PRFQ60
                 0.242654
                            0.309980
                                        0.783
                                                0.4375
## PRFQ5
                       NΑ
                                   NΑ
                                           NΑ
                                                    NA
## PRFQ15-20
                 0.266393
                            0.526358
                                        0.506
                                                0.6151
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.437 on 49 degrees of freedom
     (26 observations deleted due to missingness)
## Multiple R-squared: 0.4802, Adjusted R-squared: 0.215
## F-statistic: 1.81 on 25 and 49 DF, p-value: 0.03777
##
##
## Response Y2 :
##
## Call:
  lm(formula = Y2 ~ log(YRIN) + log(AGEN) + log(HGA1) + LOI + ASIA +
       BED + MATT + WCTP + CUTP + SHC + PRFQ, data = visit one)
##
##
## Residuals:
                1Q Median
                                 3Q
                                        Max
## -1.9607 -0.4504 0.1024 0.4788
                                    1.2990
## Coefficients: (1 not defined because of singularities)
                Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                 0.87208
                            2.52088
                                       0.346 0.73087
## log(YRIN)
                 0.15691
                            0.07225
                                       2.172 0.03474 *
## log(AGEN)
                                       1.301
                 0.77435
                            0.59522
                                              0.19936
## log(HGA1)
                -0.29076
                            0.83083
                                     -0.350
                                              0.72786
## LOIBelow T6
                 0.89693
                            0.28574
                                       3.139
                                              0.00287 **
## ASIAComplete 0.80731
                            0.31639
                                       2.552
                                              0.01389
                                              0.49277
## BEDBHPTL
                -0.31493
                            0.45571
                                     -0.691
## BEDBSTD
                 0.20181
                            0.46902
                                       0.430
                                              0.66888
## MATTAFM
                -0.83902
                            0.33632
                                     -2.495
                                             0.01602 *
## MATTOM
                -0.13108
                            0.43403 -0.302 0.76392
## MATTSFM
                -0.80023
                            0.33800 -2.368 0.02190 *
```

```
## WCTPMWc
                 0.09242
                            0.35402
                                      0.261 0.79514
## WCTPTRWc
                -0.76770
                            0.43581
                                     -1.762
                                             0.08438
## WCTPAmnWC
                 0.09811
                            0.78732
                                      0.125
                                             0.90134
## WCTPOWc
                -0.31471
                            1.06842
                                     -0.295
                                             0.76958
## CUTPFCu
                 0.01118
                            0.30040
                                      0.037
                                             0.97048
                 0.91384
                                       1.288
## CUTPLCu
                            0.70951
                                             0.20380
## CUTPNoCu
                 0.33009
                            0.76638
                                      0.431
                                             0.66857
## CUTPOCu
                -0.70606
                            0.52891
                                     -1.335
                                             0.18806
## SHCN
                -1.05883
                            0.43052
                                     -2.459
                                              0.01749 *
## PRFQunk
                -0.49542
                            0.39484
                                     -1.255
                                             0.21552
## PRFQ120
                -0.12317
                            0.59150
                                     -0.208
                                             0.83591
## PRFQ15
                                     -2.649
                -1.18468
                            0.44717
                                             0.01083
## PRFQ30
                -1.63348
                            0.90491
                                     -1.805
                                             0.07720
                                              0.84630
## PRFQ60
                -0.12504
                            0.64169
                                     -0.195
## PRFQ5
                      NA
                                 NA
                                          NA
                                                   NA
## PRFQ15-20
                -0.92647
                            1.08961
                                      -0.850
                                             0.39931
##
  Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 0.9046 on 49 degrees of freedom
##
     (26 observations deleted due to missingness)
## Multiple R-squared: 0.6498, Adjusted R-squared: 0.4712
## F-statistic: 3.637 on 25 and 49 DF, p-value: 5.534e-05
                    PRI:(Intercept) PRI:log(YRIN) PRI:log(AGEN) PRI:log(HGA1)
## PRI:(Intercept)
                        1.482934793 -2.384386e-03 -0.2831608762 -0.1399683750
## PRI:log(YRIN)
                       -0.002384386 1.218138e-03 -0.0007798527
                                                                  0.0011203906
## PRI:log(AGEN)
                       -0.283160876 -7.798527e-04 0.0826740385 -0.0327112859
## PRI:log(HGA1)
                       -0.139968375 1.120391e-03 -0.0327112859
                                                                  0.1610788499
## PRI:LOIBelow T6
                        0.029153182 -3.731384e-04 -0.0081175146
                                                                  0.0051605837
## PRI:ASIAComplete
                       -0.008165141 -9.667858e-04 0.0062521262 -0.0137192197
## PRI:BEDBHPTL
                       -0.017517319 -2.414400e-04 -0.0041156203 -0.0038312073
## PRI:BEDBSTD
                       -0.018799319 4.952398e-04 -0.0051295334
                                                                  0.0082377829
## PRI:MATTAFM
                       -0.023946866 -2.860810e-04
                                                   0.0031535767 -0.0008907143
## PRI:MATTOM
                       -0.026281194
                                     4.854042e-04
                                                    0.0005010233
                                                                  0.0124873821
## PRI:MATTSFM
                       -0.004960208
                                     3.550016e-04 -0.0038148497
                                                                  0.0056047624
## PRI:WCTPMWc
                       -0.011158068 -1.003845e-03
                                                    0.0057821111 -0.0078703169
## PRI:WCTPTRWc
                                     1.824870e-03
                                                    0.0055975699
                       -0.039384132
                                                                  0.0062514128
## PRI:WCTPAmnWC
                        0.056972522 -2.793089e-03
                                                    0.0020290565 -0.0346401283
## PRI:WCTPOWc
                        0.028122195
                                     2.955770e-04
                                                    0.0118902799 -0.0590955144
## PRI:CUTPFCu
                        0.014169344 -1.652388e-04 -0.0031480998 -0.0038971865
## PRI:CUTPLCu
                        0.044530068 -1.213621e-03 -0.0126628597
                                                                  0.0062745031
## PRI:CUTPNoCu
                                     2.186251e-03 -0.0092915264
                                                                  0.0303252294
                       -0.024245099
## PRI:CUTPOCu
                       -0.009159362 -6.061586e-04
                                                    0.0099191383 -0.0173924537
## PRI:SHCN
                       -0.045535289
                                     9.024322e-04
                                                    0.0065213849
                                                                  0.0009239762
## PRI:PRFQunk
                       -0.061640659
                                     1.858671e-03
                                                   0.0072220570
                                                                  0.0030923803
## PRI:PRFQ120
                        0.025573839
                                     2.791468e-03 -0.0016051877 -0.0324214450
## PRI:PRFQ15
                                     1.372411e-03
                                                   0.0052619943 -0.0100993069
                       -0.030454666
## PRI:PRFQ30
                       -0.044585846
                                      2.074574e-03 -0.0026175911
                                                                  0.0086701199
## PRI:PRFQ60
                       -0.026659866
                                     1.064638e-03
                                                    0.0118834047 -0.0302276937
## PRI:PRFQ5
                                  NA
                                                NA
                                                              NA
                                                                             NA
## PRI:PRFQ15-20
                       -0.024929005
                                      1.312014e-03 -0.0061168897
                                                                  0.0158530519
## :(Intercept)
                       -0.737180884
                                      1.185301e-03
                                                    0.1407619445
                                                                  0.0695796005
                        0.001185301 -6.055479e-04 0.0003876721 -0.0005569568
## :log(YRIN)
```

```
## :log(AGEN)
                        0.140761944 3.876721e-04 -0.0410980450 0.0162610890
## :log(HGA1)
                        0.069579600 -5.569568e-04 0.0162610890 -0.0800738168
## :LOIBelow T6
                       -0.014492322
                                    1.854906e-04
                                                   0.0040352931 -0.0025653749
## :ASIAComplete
                        0.004058969
                                     4.805983e-04 -0.0031079910
                                                                  0.0068199536
## :BEDBHPTL
                        0.008708025
                                     1.200221e-04
                                                   0.0020459137
                                                                  0.0019045293
##
  :BEDBSTD
                        0.009345319 -2.461884e-04
                                                   0.0025499395 -0.0040950796
## :MATTAFM
                        0.011904213
                                     1.422136e-04 -0.0015676728
                                                                  0.0004427825
## :MATTOM
                        0.013064629 -2.412990e-04 -0.0002490634 -0.0062075955
## :MATTSFM
                        0.002465766 -1.764746e-04 0.0018963978 -0.0027861803
## :WCTPMWc
                        0.005546781
                                    4.990207e-04 -0.0028743420
                                                                  0.0039124088
## :WCTPTRWc
                        0.019578224 -9.071603e-04 -0.0027826048 -0.0031076363
## :WCTPAmnWC
                       -0.028321578 1.388471e-03 -0.0010086632
                                                                  0.0172199348
## :WCTPOWc
                       -0.013979809 -1.469341e-04 -0.0059107704
                                                                  0.0293769380
## : CUTPFCu
                       -0.007043715
                                    8.214178e-05
                                                   0.0015649501
                                                                  0.0019373282
## : CUTPLCu
                                     6.033023e-04
                                                   0.0062948271 -0.0031191147
                       -0.022136317
## : CUTPNoCu
                        0.012052468 -1.086806e-03
                                                   0.0046189055 -0.0150749578
## : CUTPOCu
                                    3.013271e-04 -0.0049308973
                        0.004553205
                                                                  0.0086459529
## :SHCN
                        0.022636022 -4.486076e-04 -0.0032418420 -0.0004593173
## :PRFQunk
                        0.030642154 -9.239629e-04 -0.0035901527 -0.0015372515
## :PRFQ120
                       -0.012712997 -1.387665e-03
                                                   0.0007979539
                                                                  0.0161170064
  :PRFQ15
                        0.015139302 -6.822386e-04 -0.0026157870
                                                                 0.0050204608
  :PRFQ30
                        0.022164045 -1.031290e-03
                                                   0.0013012293 -0.0043099985
## :PRFQ60
                        0.013252871 -5.292415e-04 -0.0059073527
                                                                  0.0150264719
  :PRFQ5
                                               NΑ
  :PRFQ15-20
                        0.012392444 -6.522146e-04 0.0030407636 -0.0078807017
##
                    PRI:LOIBelow T6 PRI:ASIAComplete PRI:BEDBHPTL
                                                                      PRI:BEDBSTD
## PRI:(Intercept)
                                       -0.0081651412 -1.751732e-02 -1.879932e-02
                       2.915318e-02
## PRI:log(YRIN)
                      -3.731384e-04
                                       -0.0009667858 -2.414400e-04
                                                                     4.952398e-04
## PRI:log(AGEN)
                                        0.0062521262 -4.115620e-03 -5.129533e-03
                      -8.117515e-03
## PRI:log(HGA1)
                       5.160584e-03
                                       -0.0137192197 -3.831207e-03
                                                                     8.237783e-03
## PRI:LOIBelow T6
                       1.905317e-02
                                       -0.0043961123 -2.965271e-03
                                                                     4.292740e-04
## PRI:ASIAComplete
                      -4.396112e-03
                                        0.0233601461 1.258170e-03 -9.529167e-04
## PRI:BEDBHPTL
                      -2.965271e-03
                                        0.0012581704
                                                      4.846074e-02
                                                                     3.433213e-02
## PRI:BEDBSTD
                                                      3.433213e-02
                       4.292740e-04
                                        -0.0009529167
                                                                     5.133435e-02
## PRI:MATTAFM
                      -1.100243e-04
                                        0.0006583768
                                                      7.336838e-03
                                                                     3.985683e-03
## PRI:MATTOM
                       3.797202e-03
                                       -0.0077910481 2.852711e-03 5.506519e-03
## PRI:MATTSFM
                      -2.158885e-03
                                       -0.0004900812
                                                      4.185286e-03 -6.954057e-03
## PRI:WCTPMWc
                       4.784978e-04
                                        0.0077444299
                                                      3.008317e-03 3.251253e-03
## PRI:WCTPTRWc
                      -8.717990e-04
                                        -0.0044404374 -4.217605e-03 -1.885480e-04
## PRI:WCTPAmnWC
                                        0.0144600062 3.271270e-03 -6.163892e-03
                       2.745814e-03
## PRI:WCTPOWc
                                        0.0191614537 5.822898e-04 -1.291175e-02
                      -1.030775e-02
## PRI:CUTPFCu
                                        0.0034164465 -2.368177e-03 -5.275165e-03
                      -4.012979e-04
                                        -0.0048594140 -2.341922e-03 -6.864896e-03
## PRI:CUTPLCu
                       8.832584e-03
## PRI:CUTPNoCu
                       5.243440e-03
                                       -0.0056261876 5.733831e-05 2.144032e-03
                                        -0.0034826670 -2.525570e-03 -1.489930e-02
## PRI:CUTPOCu
                       6.391285e-04
## PRI:SHCN
                                       -0.0063077107 9.240794e-03 -3.203266e-03
                      -1.093852e-02
## PRI:PRFQunk
                      -2.159499e-03
                                        0.0003211667 -6.290187e-03 -7.069801e-03
                                        0.0065798881 -5.298620e-03 -1.236803e-02
## PRI:PRFQ120
                      -4.142736e-03
## PRI:PRFQ15
                      -4.142805e-03
                                        0.0070252213 -5.638412e-03 -1.064193e-02
## PRI:PRFQ30
                      -4.649287e-03
                                        0.0043179762 -2.713590e-03 -1.495926e-02
## PRI:PRFQ60
                      -6.732778e-03
                                        0.0072662096 -3.189110e-03 -9.519763e-03
## PRI:PRFQ5
                                 NA
                                                                 NA
## PRI:PRFQ15-20
                       3.644623e-03
                                        -0.0225096067 -1.065368e-02 -1.284950e-02
                                        0.0040589688 8.708025e-03 9.345319e-03
## :(Intercept)
                      -1.449232e-02
```

```
## :log(YRIN)
                       1.854906e-04
                                        0.0004805983 1.200221e-04 -2.461884e-04
  :log(AGEN)
                                                      2.045914e-03 2.549939e-03
                       4.035293e-03
                                       -0.0031079910
                      -2.565375e-03
                                        0.0068199536
                                                      1.904529e-03 -4.095080e-03
  :log(HGA1)
  :LOIBelow T6
                      -9.471512e-03
                                                      1.474064e-03 -2.133961e-04
                                        0.0021853489
   :ASIAComplete
                       2.185349e-03
                                       -0.0116125492 -6.254484e-04
                                                                    4.737039e-04
  :BEDBHPTL
                                       -0.0006254484 -2.409029e-02 -1.706683e-02
##
                       1.474064e-03
  :BEDBSTD
                      -2.133961e-04
                                        0.0004737039 -1.706683e-02 -2.551879e-02
## :MATTAFM
                       5.469413e-05
                                       -0.0003272853 -3.647211e-03 -1.981321e-03
  :MATTOM
                      -1.887625e-03
                                        0.0038730036 -1.418110e-03 -2.737343e-03
## :MATTSFM
                       1.073202e-03
                                        0.0002436240 -2.080545e-03
                                                                    3.456927e-03
## :WCTPMWc
                      -2.378658e-04
                                       -0.0038498292 -1.495463e-03 -1.616229e-03
## :WCTPTRWc
                                                      2.096611e-03
                       4.333795e-04
                                        0.0022073833
                                                                    9.372899e-05
  :WCTPAmnWC
                      -1.364970e-03
                                       -0.0071882056 -1.626179e-03
                                                                    3.064129e-03
## :WCTPOWc
                       5.124082e-03
                                       -0.0095253395 -2.894618e-04
                                                                    6.418553e-03
## : CUTPFCu
                       1.994890e-04
                                       -0.0016983478
                                                     1.177243e-03
                                                                    2.622334e-03
## : CUTPLCu
                      -4.390761e-03
                                        0.0024156606
                                                      1.164192e-03
                                                                    3.412605e-03
  :CUTPNoCu
                      -2.606563e-03
                                        0.0027968310 -2.850342e-05 -1.065818e-03
  :CUTPOCu
                      -3.177168e-04
                                        0.0017312666
                                                     1.255485e-03
                                                                    7.406581e-03
  :SHCN
##
                       5.437641e-03
                                        0.0031356226 -4.593686e-03
                                                                    1.592374e-03
  :PRFQunk
                       1.073507e-03
                                       -0.0001596550
                                                      3.126911e-03
                                                                    3.514465e-03
##
  :PRFQ120
                       2.059393e-03
                                       -0.0032709245
                                                      2.633994e-03
                                                                    6.148262e-03
  :PRFQ15
                                                                    5.290206e-03
                       2.059428e-03
                                       -0.0034923038
                                                      2.802908e-03
  :PRFQ30
                                                                    7.436390e-03
##
                       2.311204e-03
                                       -0.0021465067
                                                      1.348951e-03
  :PRFQ60
                                                                    4.732364e-03
                       3.346928e-03
                                       -0.0036121014
                                                      1.585337e-03
                                 NΑ
##
  :PRFQ5
                                                  NA
                                                                NA
                                                                              NA
   :PRFQ15-20
                      -1.811776e-03
                                        0.0111897380
                                                      5.296044e-03
                                                                    6.387609e-03
##
                                     PRI:MATTOM
                                                  PRI:MATTSFM
                                                                PRI: WCTPMWc
                      PRI:MATTAFM
##
  PRI: (Intercept)
                   -2.394687e-02 -0.0262811937 -0.0049602083 -0.0111580681
                                   PRI:log(YRIN)
                    -2.860810e-04
## PRI:log(AGEN)
                                   0.0005010233 -0.0038148497
                                                               0.0057821111
                     3.153577e-03
## PRI:log(HGA1)
                    -8.907143e-04
                                   0.0124873821
                                                0.0056047624 -0.0078703169
  PRI:LOIBelow T6
                    -1.100243e-04
                                   0.0037972024 - 0.0021588848
                                                               0.0004784978
  PRI: ASIAComplete
                     6.583768e-04 -0.0077910481 -0.0004900812
                                                               0.0077444299
## PRI:BEDBHPTL
                     7.336838e-03
                                   0.0028527111 0.0041852861
                                                               0.0030083169
## PRI:BEDBSTD
                     3.985683e-03
                                   0.0055065191 -0.0069540571
                                                               0.0032512529
## PRI:MATTAFM
                     2.639441e-02
                                   0.0129699387
                                                0.0122027068
                                                               0.0030314635
## PRI:MATTOM
                     1.296994e-02
                                   0.0439610005
                                                 0.0123602720 -0.0030079820
## PRI:MATTSFM
                     1.220271e-02
                                   0.0123602720
                                                 0.0266596396 -0.0024878029
## PRI:WCTPMWc
                     3.031463e-03 -0.0030079820 -0.0024878029
                                                               0.0292460997
                    -3.081225e-04 -0.0045986179 -0.0005380269
                                                               0.0066792113
## PRI:WCTPTRWc
## PRI:WCTPAmnWC
                     5.620426e-03 -0.0038716868 -0.0078668208
                                                               0.0249745413
## PRI:WCTPOWc
                     8.557433e-04 -0.0149825043 -0.0075339065
                                                               0.0211619975
## PRI:CUTPFCu
                     1.440042e-03 -0.0029553218 -0.0008968470 -0.0022311686
## PRI:CUTPLCu
                     3.658932e-03
                                  0.0036047071 -0.0008520567 -0.0029528415
## PRI:CUTPNoCu
                     9.480001e-04
                                  0.0052652499
                                                 0.0078326471 -0.0059605676
## PRI:CUTPOCu
                    -2.649666e-03 -0.0021951616
                                                 0.0052697469 -0.0073149880
## PRI:SHCN
                    -5.594183e-03 -0.0051781431
                                                 0.0003387182 -0.0163191532
## PRI:PRFQunk
                    -1.319834e-03 -0.0039036192
                                                 0.0006804867 -0.0062044044
## PRI:PRFQ120
                    -3.229553e-03 -0.0094237897 -0.0002939400 -0.0054818295
## PRI:PRFQ15
                    -6.067123e-03 -0.0147420386 -0.0027281556 -0.0025021800
                    -4.638836e-03 -0.0400706508 -0.0025823179
## PRI:PRFQ30
                                                               0.0016705858
## PRI:PRFQ60
                    -6.175386e-03 -0.0170194120 -0.0050637241
                                                               0.0012158545
## PRI:PRFQ5
                               NΑ
                                             NΑ
                                                           NΑ
                                                                         NΑ
                     ## PRI:PRFQ15-20
```

```
## :(Intercept)
                     1.190421e-02 0.0130646295 0.0024657664
                                                                0.0055467810
  :log(YRIN)
                     1.422136e-04 -0.0002412990 -0.0001764746
                                                                 0.0004990207
                    -1.567673e-03 -0.0002490634
  :log(AGEN)
                                                  0.0018963978 -0.0028743420
  :log(HGA1)
                     4.427825e-04 -0.0062075955 -0.0027861803
                                                                 0.0039124088
   :LOIBelow T6
                     5.469413e-05 -0.0018876251
                                                  0.0010732020 -0.0002378658
  :ASIAComplete
                    -3.272853e-04
                                   0.0038730036
                                                  0.0002436240 -0.0038498292
  :BEDBHPTL
                    -3.647211e-03 -0.0014181096 -0.0020805452 -0.0014954627
## :BEDBSTD
                    -1.981321e-03 -0.0027373426
                                                  0.0034569274 -0.0016162285
  :MATTAFM
                    -1.312091e-02 -0.0064474789 -0.0060660808 -0.0015069691
##
  :MATTOM
                    -6.447479e-03 -0.0218534283 -0.0061444079
                                                                0.0014952962
  :MATTSFM
                    -6.066081e-03 -0.0061444079 -0.0132527585
                                                                 0.0012367103
## :WCTPMWc
                    -1.506969e-03
                                    0.0014952962
                                                  0.0012367103 -0.0145385122
  :WCTPTRWc
                     1.531706e-04
                                    0.0022860164
                                                  0.0002674583 -0.0033202990
                    -2.793967e-03
                                    0.0019246520
## :WCTPAmnWC
                                                  0.0039106709 -0.0124150802
## :WCTPOWc
                                                  0.0037451760 -0.0105198287
                    -4.253981e-04
                                    0.0074479443
## : CUTPFCu
                    -7.158586e-04
                                    0.0014691184
                                                  0.0004458311
                                                                 0.0011091350
  :CUTPLCu
                    -1.818890e-03 -0.0017919339
                                                  0.0004235654
                                                                 0.0014678854
  :CUTPNoCu
                    -4.712598e-04 -0.0026174054 -0.0038936828
                                                                 0.0029630544
  :CUTPOCu
                                    0.0010912355 -0.0026196409
                     1.317174e-03
                                                                 0.0036363496
  :SHCN
                     2.780921e-03
                                    0.0025741038 -0.0001683800
                                                                 0.0081124051
##
  :PRFQunk
                     6.561020e-04
                                    0.0019405259 -0.0003382764
                                                                 0.0030842680
  :PRFQ120
                     1.605441e-03
                                    0.0046846548
                                                  0.0001461203
                                                                 0.0027250692
  :PRFQ15
##
                     3.016024e-03
                                    0.0073284065
                                                  0.0013561919
                                                                 0.0012438573
   :PRFQ30
##
                     2.306009e-03
                                    0.0199194988
                                                  0.0012836946
                                                               -0.0008304640
                                                  0.0025172251 -0.0006044128
  :PRFQ60
##
                     3.069843e-03
                                    0.0084605104
   :PRFQ5
                                NA
                                              NA
                                                            NA
                                                                           NA
   :PRFQ15-20
                    -1.254947e-03
                                   -0.0042808956
                                                 -0.0041833874
                                                                 0.0175252292
##
                     PRI:WCTPTRWc PRI:WCTPAmnWC
                                                   PRI: WCTPOWc
                                                                  PRI: CUTPFCu
  PRI: (Intercept)
                    -3.938413e-02
                                    0.0569725217
                                                  0.0281221955
                                                                 1.416934e-02
## PRI:log(YRIN)
                     1.824870e-03 -0.0027930893
                                                  0.0002955770 -1.652388e-04
## PRI:log(AGEN)
                     5.597570e-03
                                    0.0020290565
                                                  0.0118902799 -3.148100e-03
## PRI:log(HGA1)
                     6.251413e-03 -0.0346401283 -0.0590955144 -3.897186e-03
  PRI:LOIBelow T6
                    -8.717990e-04
                                    0.0027458144 -0.0103077548 -4.012979e-04
## PRI:ASIAComplete -4.440437e-03
                                    0.0144600062
                                                  0.0191614537
                                                                3.416447e-03
## PRI:BEDBHPTL
                    -4.217605e-03
                                    0.0032712705
                                                  0.0005822898 -2.368177e-03
## PRI:BEDBSTD
                    -1.885480e-04 -0.0061638921 -0.0129117498 -5.275165e-03
## PRI:MATTAFM
                    -3.081225e-04
                                    0.0056204263
                                                  0.0008557433
                                                                1.440042e-03
## PRI:MATTOM
                    -4.598618e-03 -0.0038716868 -0.0149825043 -2.955322e-03
## PRI:MATTSFM
                    -5.380269e-04 -0.0078668208 -0.0075339065 -8.968470e-04
                                                  0.0211619975 -2.231169e-03
## PRI:WCTPMWc
                     6.679211e-03
                                    0.0249745413
## PRI:WCTPTRWc
                     4.432064e-02 -0.0016579374
                                                  0.0056609968 -6.887363e-03
## PRI:WCTPAmnWC
                                    0.1446506443
                                                  0.0363272325
                                                                 6.421310e-03
                    -1.657937e-03
## PRI:WCTPOWc
                     5.660997e-03
                                    0.0363272325
                                                  0.2663822870
                                                                 6.657219e-04
## PRI:CUTPFCu
                    -6.887363e-03
                                    0.0064213104
                                                  0.0006657219
                                                                 2.105838e-02
## PRI:CUTPLCu
                     4.204507e-04
                                    0.0105645735 -0.0059376319
                                                                 9.715410e-03
## PRI:CUTPNoCu
                    -2.329876e-03 -0.1076523095 -0.0189870260
                                                                 8.387962e-03
## PRI:CUTPOCu
                    -8.272911e-03
                                    0.0036757150 -0.0007983597
                                                                 1.073567e-02
## PRI:SHCN
                     3.063584e-03 -0.0237010769 -0.0069771824 -7.932387e-03
## PRI:PRFQunk
                                                  0.0194673792
                     1.873429e-04 -0.0130734748
                                                                 3.745537e-03
## PRI:PRFQ120
                     5.341005e-03 -0.0029164250
                                                  0.0376199503
                                                                 6.188051e-03
## PRI:PRFQ15
                     5.428792e-03 -0.0074159252
                                                  0.0326375894
                                                                 4.140379e-03
## PRI:PRFQ30
                     1.679289e-02 -0.0081030078
                                                  0.0317225411
                                                                 4.971732e-03
## PRI:PRFQ60
                     1.433914e-03 -0.0015660813
                                                  0.0390569197 -2.170609e-03
## PRI:PRFQ5
                                NA
                                                            NA
                                                                           NA
```

```
## PRI:PRFQ15-20
                     5.599049e-04 -0.0373229121 -0.0163517451 7.406716e-03
                     1.957822e-02 -0.0283215784 -0.0139798088 -7.043715e-03
  :(Intercept)
                    -9.071603e-04 0.0013884711 -0.0001469341
                                                                8.214178e-05
  :log(YRIN)
  :log(AGEN)
                    -2.782605e-03 -0.0010086632 -0.0059107704
                                                                1.564950e-03
  :log(HGA1)
                    -3.107636e-03
                                  0.0172199348
                                                 0.0293769380
                                                                1.937328e-03
  :LOIBelow T6
                     4.333795e-04 -0.0013649702 0.0051240822
                                                                1.994890e-04
  :ASIAComplete
                     2.207383e-03 -0.0071882056 -0.0095253395 -1.698348e-03
## :BEDBHPTL
                                                               1.177243e-03
                     2.096611e-03 -0.0016261794 -0.0002894618
  :BEDBSTD
                     9.372899e-05
                                   0.0030641290
                                                 0.0064185527
                                                                2.622334e-03
##
  :MATTAFM
                     1.531706e-04 -0.0027939670 -0.0004253981 -7.158586e-04
  :MATTOM
                     2.286016e-03
                                   0.0019246520
                                                 0.0074479443
                                                                1.469118e-03
## :MATTSFM
                                   0.0039106709
                     2.674583e-04
                                                 0.0037451760
                                                                4.458311e-04
  :WCTPMWc
                    -3.320299e-03 -0.0124150802 -0.0105198287
                                                                1.109135e-03
## :WCTPTRWc
                                                                3.423773e-03
                    -2.203221e-02 0.0008241763 -0.0028141349
## :WCTPAmnWC
                     8.241763e-04 -0.0719072007 -0.0180586102 -3.192094e-03
## :WCTPOWc
                    -2.814135e-03 -0.0180586102 -0.1324211494 -3.309366e-04
  :CUTPFCu
                     3.423773e-03 -0.0031920940 -0.0003309366 -1.046832e-02
  :CUTPLCu
                    -2.090100e-04 -0.0052517492
                                                0.0029516529 -4.829622e-03
                                                 0.0094386299 -4.169735e-03
  :CUTPNoCu
                                   0.0535149793
                     1.158203e-03
## : CUTPOCu
                     4.112542e-03 -0.0018272326
                                                 0.0003968722 -5.336803e-03
##
  :SHCN
                    -1.522937e-03
                                   0.0117820291
                                                 0.0034684233 3.943265e-03
  :PRFQunk
                                   0.0064989477 -0.0096774179 -1.861942e-03
                    -9.312994e-05
  :PRFQ120
                                   0.0014497824 -0.0187012324 -3.076139e-03
##
                    -2.655064e-03
   :PRFQ15
                                   0.0036865264 -0.0162244538 -2.058221e-03
                    -2.698704e-03
##
  :PRFQ30
                    -8.347904e-03
                                   0.0040280817 -0.0157695746 -2.471495e-03
  :PRFQ60
                    -7.128122e-04
                                   0.0007785138 -0.0194155635
                                                                1.079030e-03
  :PRFQ5
                               NA
                                             NA
                                                                          NA
                                                            NA
   :PRFQ15-20
                                   0.0185535719
                                                 0.0081286069
##
                    -2.783340e-04
                                                               -3.681948e-03
##
                                   PRI:CUTPNoCu
                                                  PRI:CUTPOCu
                      PRI: CUTPLCu
                                                                    PRI:SHCN
## PRI:(Intercept)
                     0.0445300684 -2.424510e-02 -9.159362e-03 -0.0455352888
## PRI:log(YRIN)
                    -0.0012136207
                                   2.186251e-03 -6.061586e-04
                                                                0.0009024322
## PRI:log(AGEN)
                    -0.0126628597 -9.291526e-03 9.919138e-03
                                                                0.0065213849
## PRI:log(HGA1)
                     0.0062745031
                                   3.032523e-02 -1.739245e-02
                                                                0.0009239762
                                   5.243440e-03 6.391285e-04 -0.0109385180
## PRI:LOIBelow T6
                     0.0088325843
## PRI:ASIAComplete -0.0048594140 -5.626188e-03 -3.482667e-03 -0.0063077107
## PRI:BEDBHPTL
                                  5.733831e-05 -2.525570e-03 0.0092407940
                    -0.0023419220
## PRI:BEDBSTD
                    -0.0068648962
                                   2.144032e-03 -1.489930e-02 -0.0032032664
## PRI:MATTAFM
                     0.0036589318
                                   9.480001e-04 -2.649666e-03 -0.0055941830
## PRI:MATTOM
                                   5.265250e-03 -2.195162e-03 -0.0051781431
                     0.0036047071
## PRI:MATTSFM
                                   7.832647e-03 5.269747e-03 0.0003387182
                    -0.0008520567
## PRI:WCTPMWc
                    -0.0029528415 -5.960568e-03 -7.314988e-03 -0.0163191532
## PRI:WCTPTRWc
                     0.0004204507 -2.329876e-03 -8.272911e-03 0.0030635842
## PRI:WCTPAmnWC
                     0.0105645735 -1.076523e-01
                                                 3.675715e-03 -0.0237010769
## PRI:WCTPOWc
                    -0.0059376319 -1.898703e-02 -7.983597e-04 -0.0069771824
## PRI:CUTPFCu
                     0.0097154095
                                   8.387962e-03
                                                 1.073567e-02 -0.0079323872
## PRI:CUTPLCu
                                   6.273113e-04
                                                 9.438001e-03 -0.0061450547
                     0.1174714870
## PRI:CUTPNoCu
                     0.0006273113
                                   1.370573e-01
                                                 3.602748e-03 -0.0047023304
## PRI:CUTPOCu
                     0.0094380006
                                   3.602748e-03
                                                 6.527958e-02
                                                                0.0016206471
## PRI:SHCN
                    -0.0061450547 -4.702330e-03
                                                 1.620647e-03
                                                                0.0432526949
## PRI:PRFQunk
                    -0.0091909142
                                  8.729872e-03 -6.776203e-05
                                                                0.0071550015
## PRI:PRFQ120
                    -0.0013307563 -5.099170e-03
                                                 3.865042e-03
                                                                0.0141995582
## PRI:PRFQ15
                    -0.0026323272 -5.790037e-03 8.409860e-05
                                                                0.0067013781
## PRI:PRFQ30
                    -0.0027286571 3.804102e-03 -2.183299e-02
                                                                0.0206292562
## PRI:PRFQ60
                    -0.0087836405 -8.071022e-03 -1.059117e-02
                                                                0.0189786200
```

```
## PRI:PRFQ5
                                                                           NA
## PRI:PRFQ15-20
                     0.0115009856
                                   1.317037e-02
                                                  1.408157e-02
                                                                0.0270255844
                                                                0.0226360219
  :(Intercept)
                    -0.0221363174
                                   1.205247e-02
                                                  4.553205e-03
   :log(YRIN)
                     0.0006033023 -1.086806e-03
                                                  3.013271e-04 -0.0004486076
##
  :log(AGEN)
                     0.0062948271
                                   4.618906e-03 -4.930897e-03 -0.0032418420
                    -0.0031191147 -1.507496e-02 8.645953e-03 -0.0004593173
  :log(HGA1)
  :LOIBelow T6
                    -0.0043907610 -2.606563e-03 -3.177168e-04
                                                                0.0054376405
  :ASIAComplete
                     0.0024156606
                                  2.796831e-03
                                                 1.731267e-03
                                                                0.0031356226
   : BEDBHPTL
                     0.0011641916 -2.850342e-05
                                                  1.255485e-03 -0.0045936859
##
  :BEDBSTD
                     0.0034126047 -1.065818e-03
                                                  7.406581e-03
                                                                0.0015923740
  :MATTAFM
                    -0.0018188895 -4.712598e-04
                                                  1.317174e-03
                                                                0.0027809212
  :MATTOM
                    -0.0017919339 -2.617405e-03
                                                  1.091236e-03
                                                                0.0025741038
  :MATTSFM
                     0.0004235654 -3.893683e-03 -2.619641e-03 -0.0001683800
                     0.0014678854
                                  2.963054e-03
                                                  3.636350e-03
                                                                0.0081124051
  :WCTPMWc
## :WCTPTRWc
                    -0.0002090100
                                   1.158203e-03
                                                  4.112542e-03 -0.0015229366
## :WCTPAmnWC
                    -0.0052517492
                                   5.351498e-02 -1.827233e-03
                                                                0.0117820291
  :WCTPOWc
                                   9.438630e-03 3.968722e-04
                                                                0.0034684233
                     0.0029516529
  :CUTPFCu
                    -0.0048296218 -4.169735e-03 -5.336803e-03
                                                                0.0039432645
  :CUTPLCu
                    -0.0583961850 -3.118424e-04 -4.691719e-03
                                                                0.0030547647
  :CUTPNoCu
                    -0.0003118424 -6.813246e-02 -1.790960e-03
                                                                0.0023375728
##
  :CUTPOCu
                    -0.0046917192 -1.790960e-03 -3.245109e-02 -0.0008056390
  :SHCN
                                   2.337573e-03 -8.056390e-04 -0.0215013229
                     0.0030547647
  :PRFQunk
                     0.0045688902 -4.339702e-03 3.368514e-05 -0.0035568188
##
  :PRFQ120
                                   2.534845e-03 -1.921349e-03 -0.0070587344
##
                     0.0006615315
##
  :PRFQ15
                     0.0013085547
                                   2.878282e-03 -4.180621e-05 -0.0033313183
  :PRFQ30
                     0.0013564412 -1.891055e-03
                                                  1.085338e-02 -0.0102549980
  :PRFQ60
                     0.0043664306
                                   4.012181e-03
                                                  5.264971e-03 -0.0094344511
   :PRFQ5
                               NA
                                              NA
                                                            NA
                                                                           NA
   :PRFQ15-20
                    -0.0057172485
                                  -6.547117e-03 -7.000081e-03
##
                                                               -0.0134346731
##
                      PRI:PRFQunk
                                    PRI:PRFQ120
                                                    PRI:PRFQ15
                                                                 PRI:PRFQ30
## PRI:(Intercept)
                    -6.164066e-02
                                   0.0255738386 -3.045467e-02 -0.044585846
  PRI:log(YRIN)
                     1.858671e-03
                                   0.0027914682
                                                 1.372411e-03
                                                                0.002074574
## PRI:log(AGEN)
                     7.222057e-03 -0.0016051877
                                                 5.261994e-03 -0.002617591
                     3.092380e-03 -0.0324214450 -1.009931e-02
## PRI:log(HGA1)
                                                               0.008670120
  PRI:LOIBelow T6
                    -2.159499e-03 -0.0041427363 -4.142805e-03 -0.004649287
                    3.211667e-04 0.0065798881 7.025221e-03 0.004317976
## PRI:ASIAComplete
## PRI:BEDBHPTL
                    -6.290187e-03 -0.0052986199 -5.638412e-03 -0.002713590
## PRI:BEDBSTD
                    -7.069801e-03 -0.0123680258 -1.064193e-02 -0.014959262
## PRI:MATTAFM
                    -1.319834e-03 -0.0032295527 -6.067123e-03 -0.004638836
                    -3.903619e-03 -0.0094237897 -1.474204e-02 -0.040070651
## PRI:MATTOM
                     6.804867e-04 -0.0002939400 -2.728156e-03 -0.002582318
## PRI:MATTSFM
## PRI:WCTPMWc
                    -6.204404e-03 -0.0054818295 -2.502180e-03
                                                                0.001670586
## PRI:WCTPTRWc
                     1.873429e-04
                                   0.0053410053
                                                 5.428792e-03
                                                                0.016792890
## PRI:WCTPAmnWC
                    -1.307347e-02 -0.0029164250 -7.415925e-03 -0.008103008
## PRI:WCTPOWc
                     1.946738e-02
                                   0.0376199503
                                                 3.263759e-02
                                                                0.031722541
## PRI:CUTPFCu
                     3.745537e-03
                                   0.0061880513
                                                  4.140379e-03
                                                                0.004971732
## PRI:CUTPLCu
                    -9.190914e-03 -0.0013307563 -2.632327e-03 -0.002728657
## PRI:CUTPNoCu
                     8.729872e-03 -0.0050991697 -5.790037e-03
                                                                0.003804102
## PRI:CUTPOCu
                    -6.776203e-05
                                   0.0038650416
                                                  8.409860e-05 -0.021832986
## PRI:SHCN
                     7.155002e-03
                                   0.0141995582
                                                  6.701378e-03
                                                                0.020629256
## PRI:PRFQunk
                     3.637933e-02
                                   0.0301177094
                                                  2.825191e-02
                                                                0.034855270
## PRI:PRFQ120
                     3.011771e-02
                                   0.0816453827
                                                  3.712015e-02
                                                                0.042876994
## PRI:PRFQ15
                     2.825191e-02
                                   0.0371201454
                                                  4.666201e-02
                                                                0.042837203
## PRI:PRFQ30
                     3.485527e-02
                                   0.0428769940
                                                 4.283720e-02
                                                                0.191085869
```

```
## PRI:PRFQ60
                     2.882034e-02
                                    0.0410969527
                                                  3.398451e-02
                                                                 0.051203836
                                                                          NΑ
## PRI:PRFQ5
                                NΑ
                                              NΑ
                                                             NΑ
                                    0.0312463904
                                                   2.230096e-02
## PRI:PRFQ15-20
                     3.167840e-02
                                                                 0.029269901
                     3.064215e-02
                                   -0.0127129966
   :(Intercept)
                                                   1.513930e-02
                                                                 0.022164045
   :log(YRIN)
                    -9.239629e-04
                                   -0.0013876652 -6.822386e-04
                                                                -0.001031290
   :log(AGEN)
                    -3.590153e-03
                                    0.0007979539 -2.615787e-03
                                                                 0.001301229
  :log(HGA1)
                    -1.537251e-03
                                    0.0161170064
                                                  5.020461e-03 -0.004309998
                                                  2.059428e-03
  :LOIBelow T6
                     1.073507e-03
                                    0.0020593933
                                                                 0.002311204
   :ASIAComplete
                    -1.596550e-04 -0.0032709245 -3.492304e-03 -0.002146507
  :BEDBHPTL
                     3.126911e-03
                                    0.0026339940
                                                   2.802908e-03
                                                                 0.001348951
  :BEDBSTD
                     3.514465e-03
                                    0.0061482624
                                                   5.290206e-03
                                                                 0.007436390
  :MATTAFM
                     6.561020e-04
                                    0.0016054411
                                                   3.016024e-03
                                                                 0.002306009
                                    0.0046846548
  :MATTOM
                     1.940526e-03
                                                  7.328407e-03
                                                                 0.019919499
                                    0.0001461203
                                                   1.356192e-03
  :MATTSFM
                    -3.382764e-04
                                                                 0.001283695
## :WCTPMWc
                     3.084268e-03
                                    0.0027250692
                                                   1.243857e-03 -0.000830464
  :WCTPTRWc
                    -9.312994e-05 -0.0026550642 -2.698704e-03 -0.008347904
  :WCTPAmnWC
                     6.498948e-03
                                    0.0014497824
                                                  3.686526e-03
                                                                 0.004028082
  :WCTPOWc
                    -9.677418e-03 -0.0187012324 -1.622445e-02 -0.015769575
  :CUTPFCu
                    -1.861942e-03 -0.0030761387 -2.058221e-03 -0.002471495
  :CUTPLCu
                     4.568890e-03
                                    0.0006615315
                                                  1.308555e-03
                                                                 0.001356441
  :CUTPNoCu
                    -4.339702e-03
                                    0.0025348454
                                                  2.878282e-03 -0.001891055
  :CUTPOCu
                     3.368514e-05 -0.0019213487 -4.180621e-05
                                                                0.010853384
  :SHCN
##
                    -3.556819e-03 -0.0070587344 -3.331318e-03 -0.010254998
  :PRFQunk
##
                    -1.808451e-02 -0.0149717977 -1.404429e-02 -0.017326884
  :PRFQ120
                    -1.497180e-02 -0.0405866904 -1.845277e-02 -0.021314558
  :PRFQ15
                    -1.404429e-02 -0.0184527747 -2.319613e-02 -0.021294778
  :PRFQ30
                    -1.732688e-02 -0.0213145585 -2.129478e-02 -0.094990589
##
   :PRFQ60
                    -1.432686e-02 -0.0204296831 -1.689402e-02 -0.025453910
##
   :PRFQ5
                                NA
                                              NA
                                                             NA
##
   :PRFQ15-20
                    -1.574763e-02 -0.0155328756 -1.108602e-02 -0.014550344
##
                       PRI:PRFQ60 PRI:PRFQ5 PRI:PRFQ15-20 :(Intercept)
  PRI: (Intercept)
                    -0.0266598656
                                          NA -0.0249290054 -0.737180884
  PRI:log(YRIN)
                     0.0010646378
                                              0.0013120141
                                                             0.001185301
  PRI:log(AGEN)
                                          NA -0.0061168897
                                                             0.140761944
                     0.0118834047
  PRI:log(HGA1)
                                              0.0158530519
                                                             0.069579600
                     -0.0302276937
  PRI:LOIBelow T6
                    -0.0067327780
                                              0.0036446230 -0.014492322
  PRI: ASIAComplete
                     0.0072662096
                                          NA -0.0225096067
                                                             0.004058969
## PRI:BEDBHPTL
                                          NA -0.0106536776
                                                             0.008708025
                    -0.0031891101
## PRI:BEDBSTD
                    -0.0095197631
                                             -0.0128495016
                                                             0.009345319
                                              0.0025244874
## PRI:MATTAFM
                    -0.0061753862
                                                             0.011904213
  PRI:MATTOM
                    -0.0170194120
                                              0.0086115758
                                                             0.013064629
## PRI:MATTSFM
                    -0.0050637241
                                              0.0084154254
                                                             0.002465766
## PRI:WCTPMWc
                     0.0012158545
                                             -0.0352542675
                                                             0.005546781
## PRI:WCTPTRWc
                                              0.0005599049
                     0.0014339140
                                                             0.019578224
## PRI:WCTPAmnWC
                    -0.0015660813
                                          NA -0.0373229121 -0.028321578
## PRI:WCTPOWc
                     0.0390569197
                                             -0.0163517451 -0.013979809
## PRI:CUTPFCu
                    -0.0021706089
                                              0.0074067160 -0.007043715
## PRI:CUTPLCu
                    -0.0087836405
                                              0.0115009856 -0.022136317
                                              0.0131703745
## PRI:CUTPNoCu
                    -0.0080710223
                                                             0.012052468
## PRI:CUTPOCu
                    -0.0105911700
                                              0.0140815688
                                                             0.004553205
## PRI:SHCN
                     0.0189786200
                                          NΑ
                                              0.0270255844
                                                             0.022636022
## PRI:PRFQunk
                     0.0288203424
                                              0.0316784025
                                                             0.030642154
## PRI:PRFQ120
                     0.0410969527
                                              0.0312463904 -0.012712997
## PRI:PRFQ15
                     0.0339845076
                                              0.0223009615 0.015139302
```

```
## PRI:PRFQ30
                     0.0512038360
                                              0.0292699011
                                                            0.022164045
## PRI:PRFQ60
                     0.0960876949
                                              0.0209535171
                                                            0.013252871
                                          NΑ
## PRI:PRFQ5
                                          NA
                                                        NA
## PRI:PRFQ15-20
                     0.0209535171
                                              0.2770528720
                                                            0.012392444
                                          NΑ
   :(Intercept)
                     0.0132528708
                                              0.0123924439
                                                            6.354814424
   :log(YRIN)
                    -0.0005292415
                                             -0.0006522146 -0.010217801
  :log(AGEN)
                    -0.0059073527
                                              0.0030407636 -1.213428148
  :log(HGA1)
                     0.0150264719
                                          NA -0.0078807017 -0.599805907
   :LOIBelow T6
                     0.0033469275
                                             -0.0018117765
                                                            0.124930014
  :ASIAComplete
                    -0.0036121014
                                              0.0111897380 -0.034990046
  :BEDBHPTL
                     0.0015853367
                                              0.0052960437 -0.075066896
  :BEDBSTD
                     0.0047323641
                                              0.0063876085 -0.080560643
  :MATTAFM
                     0.0030698428
                                          NA -0.0012549465 -0.102619408
                     0.0084605104
                                          NA -0.0042808956 -0.112622692
  :MATTOM
## :MATTSFM
                                          NA -0.0041833874 -0.021255960
                     0.0025172251
## :WCTPMWc
                    -0.0006044128
                                              0.0175252292 -0.047815624
  :WCTPTRWc
                    -0.0007128122
                                             -0.0002783340 -0.168772661
  :WCTPAmnWC
                     0.0007785138
                                              0.0185535719
                                                            0.244144115
  :WCTPOWc
                    -0.0194155635
                                              0.0081286069
                                                            0.120511930
## : CUTPFCu
                     0.0010790302
                                          NA -0.0036819484
                                                            0.060719832
##
  : CUTPLCu
                     0.0043664306
                                          NA -0.0057172485
                                                            0.190824521
  :CUTPNoCu
                                          NA -0.0065471175 -0.103897425
                     0.0040121814
## :CUTPOCu
                                          NA -0.0070000808 -0.039250577
                     0.0052649706
  :SHCN
                    -0.0094344511
                                          NA -0.0134346731 -0.195132188
                    -0.0143268643
  :PRFQunk
                                          NA -0.0157476329 -0.264148467
  :PRFQ120
                    -0.0204296831
                                          NA -0.0155328756 0.109591466
  :PRFQ15
                    -0.0168940195
                                          NA -0.0110860185 -0.130507256
  :PRFQ30
                    -0.0254539102
                                          NA -0.0145503441 -0.191063545
  :PRFQ60
                    -0.0477661002
                                          NA -0.0104161912 -0.114245413
  :PRFQ5
                               NA
                                          NA
                                                        NA
                                                                     NA
##
  :PRFQ15-20
                    -0.0104161912
                                          NA -0.1377255979 -0.106828165
##
                        :log(YRIN)
                                      :log(AGEN)
                                                    :log(HGA1)
                                                                 :LOIBelow T6
  PRI: (Intercept)
                     1.185301e-03
                                    0.1407619445
                                                  0.0695796005 -1.449232e-02
  PRI:log(YRIN)
                    -6.055479e-04
                                    0.0003876721 -0.0005569568
                                                                1.854906e-04
## PRI:log(AGEN)
                     3.876721e-04
                                   -0.0410980450
                                                 0.0162610890
                                                                4.035293e-03
## PRI:log(HGA1)
                    -5.569568e-04
                                   0.0162610890 -0.0800738168 -2.565375e-03
## PRI:LOIBelow T6
                     1.854906e-04
                                    0.0040352931 -0.0025653749 -9.471512e-03
## PRI:ASIAComplete
                     4.805983e-04 -0.0031079910
                                                 0.0068199536
                                                                2.185349e-03
## PRI:BEDBHPTL
                     1.200221e-04
                                    0.0020459137
                                                  0.0019045293
                                                                1.474064e-03
## PRI:BEDBSTD
                                   0.0025499395 -0.0040950796 -2.133961e-04
                    -2.461884e-04
## PRI:MATTAFM
                                                 0.0004427825
                     1.422136e-04 -0.0015676728
                                                                5.469413e-05
## PRI:MATTOM
                    -2.412990e-04 -0.0002490634 -0.0062075955 -1.887625e-03
## PRI:MATTSFM
                    -1.764746e-04 0.0018963978 -0.0027861803
                                                                1.073202e-03
## PRI:WCTPMWc
                     4.990207e-04 -0.0028743420
                                                 0.0039124088 -2.378658e-04
## PRI:WCTPTRWc
                    -9.071603e-04 -0.0027826048 -0.0031076363 4.333795e-04
## PRI:WCTPAmnWC
                     1.388471e-03 -0.0010086632
                                                  0.0172199348 -1.364970e-03
## PRI:WCTPOWc
                    -1.469341e-04 -0.0059107704
                                                  0.0293769380
                                                                5.124082e-03
## PRI:CUTPFCu
                     8.214178e-05
                                   0.0015649501
                                                  0.0019373282
                                                                1.994890e-04
## PRI:CUTPLCu
                     6.033023e-04
                                   0.0062948271 -0.0031191147 -4.390761e-03
## PRI:CUTPNoCu
                    -1.086806e-03
                                   0.0046189055 -0.0150749578 -2.606563e-03
## PRI:CUTPOCu
                                                 0.0086459529 -3.177168e-04
                     3.013271e-04 -0.0049308973
## PRI:SHCN
                    -4.486076e-04 -0.0032418420 -0.0004593173 5.437641e-03
## PRI:PRFQunk
                    -9.239629e-04 -0.0035901527 -0.0015372515
                                                                1.073507e-03
                    -1.387665e-03 0.0007979539 0.0161170064 2.059393e-03
## PRI:PRFQ120
```

```
## PRI:PRFQ15
                    -6.822386e-04 -0.0026157870 0.0050204608
                                                               2.059428e-03
## PRI:PRFQ30
                    -1.031290e-03 0.0013012293 -0.0043099985
                                                               2.311204e-03
## PRI:PRFQ60
                    -5.292415e-04 -0.0059073527
                                                0.0150264719
                                                               3.346928e-03
## PRI:PRFQ5
                                                                         NA
                               NΑ
                                             NΑ
                                                           NΑ
## PRI:PRFQ15-20
                    -6.522146e-04
                                   0.0030407636 -0.0078807017 -1.811776e-03
  :(Intercept)
                    -1.021780e-02 -1.2134281484 -0.5998059070
                                                              1.249300e-01
                     5.220082e-03 -0.0033418995 0.0048012054 -1.599008e-03
  :log(YRIN)
                    -3.341900e-03 0.3542827203 -0.1401775399 -3.478595e-02
## :log(AGEN)
  :log(HGA1)
                     4.801205e-03 -0.1401775399
                                                0.6902705390
                                                               2.211463e-02
  :LOIBelow T6
                    -1.599008e-03 -0.0347859521
                                                0.0221146285
                                                               8.164848e-02
  :ASIAComplete
                    -4.142963e-03
                                  0.0267922111 -0.0587909164 -1.883864e-02
## :BEDBHPTL
                    -1.034642e-03 -0.0176366511 -0.0164178572 -1.270706e-02
## :BEDBSTD
                     2.122249e-03 -0.0219815686 0.0353013375
                                                              1.839566e-03
## :MATTAFM
                    -1.225942e-03
                                   0.0135140095 -0.0038169742 -4.714868e-04
## :MATTOM
                     2.080100e-03
                                   0.0021470329
                                                0.0535121276
                                                              1.627214e-02
## :MATTSFM
                     1.521287e-03 -0.0163477597
                                                 0.0240180655 -9.251460e-03
  :WCTPMWc
                                   0.0247780570 -0.0337266370
                                                               2.050505e-03
                    -4.301772e-03
## :WCTPTRWc
                     7.820109e-03
                                   ## :WCTPAmnWC
                    -1.196921e-02
                                   0.0086951077 -0.1484432005
                                                              1.176663e-02
## :WCTPOWc
                     1.266635e-03
                                   0.0509533682 -0.2532417669 -4.417178e-02
## : CUTPFCu
                    -7.080973e-04 -0.0134905394 -0.0167005974 -1.719680e-03
## : CUTPLCu
                    -5.200724e-03 -0.0542641012 0.0268881025
                                                              3.785024e-02
                                                 0.1299525819
## : CUTPNoCu
                     9.368733e-03 -0.0398169404
                                                               2.246969e-02
## : CUTPOCu
                                   0.0425064428 -0.0745318111
                                                               2.738855e-03
                    -2.597569e-03
## :SHCN
                                   0.0279460640 0.0039595115 -4.687479e-02
                     3.867189e-03
  :PRFQunk
                     7.964956e-03
                                   0.0309486515 0.0132517649 -9.254091e-03
## :PRFQ120
                     1.196227e-02 -0.0068787042 -0.1389354862 -1.775285e-02
  :PRFQ15
                                   0.0225492027 -0.0432785185 -1.775315e-02
                     5.881188e-03
## :PRFQ30
                     8.890165e-03 -0.0112171527
                                                0.0371540296 -1.992357e-02
## : PRFQ60
                     4.562288e-03
                                   0.0509239058 -0.1295346126 -2.885195e-02
  :PRFQ5
                                             NA
                                                           NA
  :PRFQ15-20
                     5.622369e-03 -0.0262126827
                                                 0.0679350185
                                                               1.561829e-02
##
                    :ASIAComplete
                                      :BEDBHPTL
                                                     :BEDBSTD
                                                                   :MATTAFM
                                                 9.345319e-03
                     0.0040589688
## PRI:(Intercept)
                                   8.708025e-03
                                                               1.190421e-02
  PRI:log(YRIN)
                     0.0004805983
                                   1.200221e-04 -2.461884e-04
                                                               1.422136e-04
## PRI:log(AGEN)
                                   2.045914e-03 2.549939e-03 -1.567673e-03
                    -0.0031079910
## PRI:log(HGA1)
                     0.0068199536
                                   1.904529e-03 -4.095080e-03
                                                              4.427825e-04
## PRI:LOIBelow T6
                     0.0021853489
                                   1.474064e-03 -2.133961e-04 5.469413e-05
## PRI:ASIAComplete -0.0116125492 -6.254484e-04 4.737039e-04 -3.272853e-04
## PRI:BEDBHPTL
                    -0.0006254484 -2.409029e-02 -1.706683e-02 -3.647211e-03
## PRI:BEDBSTD
                     0.0004737039 -1.706683e-02 -2.551879e-02 -1.981321e-03
## PRI:MATTAFM
                    -0.0003272853 -3.647211e-03 -1.981321e-03 -1.312091e-02
                     0.0038730036 -1.418110e-03 -2.737343e-03 -6.447479e-03
## PRI:MATTOM
                     0.0002436240 -2.080545e-03 3.456927e-03 -6.066081e-03
## PRI:MATTSFM
## PRI:WCTPMWc
                    -0.0038498292 -1.495463e-03 -1.616229e-03 -1.506969e-03
                                                9.372899e-05 1.531706e-04
## PRI:WCTPTRWc
                                  2.096611e-03
                     0.0022073833
## PRI:WCTPAmnWC
                    -0.0071882056 -1.626179e-03
                                                 3.064129e-03 -2.793967e-03
## PRI:WCTPOWc
                    -0.0095253395 -2.894618e-04
                                                 6.418553e-03 -4.253981e-04
## PRI:CUTPFCu
                    -0.0016983478
                                  1.177243e-03
                                                 2.622334e-03 -7.158586e-04
## PRI:CUTPLCu
                     0.0024156606
                                   1.164192e-03
                                                 3.412605e-03 -1.818890e-03
## PRI:CUTPNoCu
                     0.0027968310 -2.850342e-05 -1.065818e-03 -4.712598e-04
## PRI:CUTPOCu
                     0.0017312666
                                  1.255485e-03
                                                7.406581e-03 1.317174e-03
## PRI:SHCN
                     0.0031356226 -4.593686e-03
                                                1.592374e-03 2.780921e-03
## PRI:PRFQunk
                    -0.0001596550 3.126911e-03 3.514465e-03 6.561020e-04
```

```
## PRI:PRFQ120
                    -0.0032709245
                                   2.633994e-03
                                                 6.148262e-03
                                                               1.605441e-03
## PRI:PRFQ15
                                   2.802908e-03
                                                  5.290206e-03
                                                                3.016024e-03
                    -0.0034923038
## PRI:PRFQ30
                    -0.0021465067
                                                  7.436390e-03
                                   1.348951e-03
                                                                2.306009e-03
## PRI:PRFQ60
                    -0.0036121014
                                   1.585337e-03
                                                  4.732364e-03
                                                                3.069843e-03
## PRI:PRFQ5
                               NΑ
                                              NΑ
                                                            NΑ
                                                                          NΑ
## PRI:PRFQ15-20
                     0.0111897380
                                   5.296044e-03
                                                  6.387609e-03 -1.254947e-03
  :(Intercept)
                    -0.0349900464 -7.506690e-02 -8.056064e-02 -1.026194e-01
  :log(YRIN)
                    -0.0041429631 -1.034642e-03
                                                 2.122249e-03 -1.225942e-03
##
  :log(AGEN)
                     0.0267922111 -1.763665e-02 -2.198157e-02 1.351401e-02
  :log(HGA1)
                    -0.0587909164 -1.641786e-02
                                                  3.530134e-02 -3.816974e-03
  :LOIBelow T6
                    -0.0188386423 -1.270706e-02
                                                 1.839566e-03 -4.714868e-04
                                                                2.821340e-03
  :ASIAComplete
                     0.1001051391
                                  5.391632e-03 -4.083530e-03
  :BEDBHPTL
                     0.0053916324
                                   2.076686e-01
                                                 1.471233e-01
                                                                3.144052e-02
## :BEDBSTD
                                   1.471233e-01
                                                                1.707983e-02
                    -0.0040835299
                                                  2.199829e-01
## :MATTAFM
                     0.0028213396
                                   3.144052e-02
                                                  1.707983e-02
                                                                1.131078e-01
## :MATTOM
                    -0.0333869467
                                   1.222471e-02
                                                  2.359706e-02
                                                                5.558003e-02
  :MATTSFM
                    -0.0021001428
                                   1.793519e-02 -2.980019e-02
                                                                5.229221e-02
  :WCTPMWc
                     0.0331871738
                                   1.289153e-02 1.393258e-02
                                                                1.299072e-02
  :WCTPTRWc
                    -0.0190285881 -1.807368e-02 -8.079840e-04 -1.320396e-03
                     0.0619654056
## :WCTPAmnWC
                                   1.401836e-02 -2.641410e-02
                                                                2.408519e-02
##
  :WCTPOWc
                     0.0821124993
                                   2.495284e-03 -5.533067e-02
                                                                3.667113e-03
## : CUTPFCu
                     0.0146404844 -1.014834e-02 -2.260564e-02
                                                                6.171007e-03
## :CUTPLCu
                    -0.0208240269 -1.003583e-02 -2.941811e-02
                                                                1.567961e-02
  :CUTPNoCu
                                   2.457116e-04 9.187811e-03
                    -0.0241098789
                                                                4.062461e-03
## : CUTPOCu
                    -0.0149242585 -1.082282e-02 -6.384789e-02 -1.135460e-02
  :SHCN
                    -0.0270304071 3.959954e-02 -1.372694e-02 -2.397273e-02
## :PRFQunk
                     0.0013762942 -2.695531e-02 -3.029619e-02 -5.655880e-03
                     0.0281967677 -2.270615e-02 -5.300065e-02 -1.383959e-02
##
  :PRFQ120
  :PRFQ15
                     0.0301051520 -2.416226e-02 -4.560384e-02 -2.599942e-02
## : PRFQ30
                     0.0185038056 -1.162854e-02 -6.410487e-02 -1.987878e-02
                     0.0311378585 -1.366628e-02 -4.079500e-02 -2.646336e-02
## : PRFQ60
##
  :PRFQ5
                               NA
                                              NA
                                                            NA
                                                                          NA
##
   :PRFQ15-20
                    -0.0964603257 -4.565416e-02 -5.506392e-02
                                                                1.081818e-02
##
                          :MATTOM
                                        :MATTSFM
                                                      :WCTPMWc
                                                                   :WCTPTRWc
  PRI: (Intercept)
                     0.0130646295
                                   0.0024657664
                                                  0.0055467810
                                                                1.957822e-02
                    -0.0002412990 -0.0001764746
                                                 0.0004990207 -9.071603e-04
## PRI:log(YRIN)
## PRI:log(AGEN)
                    -0.0002490634
                                   0.0018963978 -0.0028743420 -2.782605e-03
## PRI:log(HGA1)
                    -0.0062075955 -0.0027861803 0.0039124088 -3.107636e-03
## PRI:LOIBelow T6
                                   0.0010732020 -0.0002378658
                                                                4.333795e-04
                    -0.0018876251
                                   0.0002436240 -0.0038498292
                                                                2.207383e-03
## PRI:ASIAComplete 0.0038730036
## PRI:BEDBHPTL
                    -0.0014181096 -0.0020805452 -0.0014954627
                                                                2.096611e-03
## PRI:BEDBSTD
                    -0.0027373426
                                   0.0034569274 -0.0016162285
                                                                9.372899e-05
## PRI:MATTAFM
                    -0.0064474789 -0.0060660808 -0.0015069691
                                                                1.531706e-04
## PRI:MATTOM
                    -0.0218534283 -0.0061444079
                                                0.0014952962
                                                                2.286016e-03
## PRI:MATTSFM
                    -0.0061444079 -0.0132527585 0.0012367103
                                                                2.674583e-04
## PRI:WCTPMWc
                                   0.0012367103 -0.0145385122 -3.320299e-03
                     0.0014952962
## PRI:WCTPTRWc
                     0.0022860164
                                   0.0002674583 -0.0033202990 -2.203221e-02
## PRI:WCTPAmnWC
                     0.0019246520
                                   0.0039106709 -0.0124150802 8.241763e-04
## PRI:WCTPOWc
                     0.0074479443
                                   0.0037451760 -0.0105198287 -2.814135e-03
## PRI:CUTPFCu
                     0.0014691184
                                   0.0004458311
                                                  0.0011091350 3.423773e-03
## PRI:CUTPLCu
                                                  0.0014678854 -2.090100e-04
                    -0.0017919339
                                   0.0004235654
## PRI:CUTPNoCu
                    -0.0026174054 -0.0038936828
                                                  0.0029630544 1.158203e-03
                     0.0010912355 -0.0026196409
## PRI:CUTPOCu
                                                  0.0036363496 4.112542e-03
## PRI:SHCN
                     0.0025741038 -0.0001683800
                                                 0.0081124051 -1.522937e-03
```

```
## PRI:PRFQunk
                     0.0019405259 -0.0003382764 0.0030842680 -9.312994e-05
## PRI:PRFQ120
                                  0.0001461203
                                                0.0027250692 -2.655064e-03
                     0.0046846548
                     0.0073284065
                                  0.0013561919
## PRI:PRFQ15
                                                0.0012438573 -2.698704e-03
## PRI:PRFQ30
                     0.0199194988
                                  0.0012836946 -0.0008304640 -8.347904e-03
## PRI:PRFQ60
                     0.0084605104
                                  0.0025172251 -0.0006044128 -7.128122e-04
## PRI:PRFQ5
                              NA
                                            NA
                                                          NΑ
## PRI:PRFQ15-20
                   -0.0042808956 -0.0041833874
                                                0.0175252292 -2.783340e-04
## :(Intercept)
                   -0.1126226922 -0.0212559604 -0.0478156239 -1.687727e-01
  :log(YRIN)
                     0.0020801005
                                  0.0015212869 -0.0043017717
                                                              7.820109e-03
  :log(AGEN)
                     0.0021470329 -0.0163477597
                                                0.0247780570
                                                              2.398724e-02
  :log(HGA1)
                     0.0535121276
                                  0.0240180655 -0.0337266370
                                                              2.678915e-02
                                                0.0020505046 -3.735917e-03
## :LOIBelow T6
                    0.0162721358 -0.0092514601
## :ASIAComplete
                   -0.0333869467 -0.0021001428
                                                0.0331871738 -1.902859e-02
                     0.0122247113
                                  0.0179351894
                                                0.0128915283 -1.807368e-02
## :BEDBHPTL
## :BEDBSTD
                     0.0235970639 -0.0298001926
                                                0.0139325809 -8.079840e-04
## :MATTAFM
                     0.0555800253
                                  0.0522922099
                                                0.0129907180 -1.320396e-03
## :MATTOM
                     0.1883858960
                                  0.0529674233 -0.0128900930 -1.970644e-02
  :MATTSFM
                     0.0529674233
                                  0.1142444450 -0.0106609716 -2.305605e-03
                                                0.1253281916
## :WCTPMWc
                   -0.0128900930 -0.0106609716
                                                              2.862240e-02
## :WCTPTRWc
                   -0.0197064384 -0.0023056046
                                                0.0286223970
                                                              1.899270e-01
## :WCTPAmnWC
                   -0.0165913236 -0.0337116549
                                                0.1070232998 -7.104753e-03
## :WCTPOWc
                   -0.0642044644 -0.0322850186
                                                0.0906854217
                                                              2.425905e-02
## :CUTPFCu
                   -0.0126644284 -0.0038432548 -0.0095612176 -2.951439e-02
## : CUTPLCu
                     0.0154472368 -0.0036513151 -0.0126537995
                                                              1.801756e-03
## : CUTPNoCu
                    0.0225631540
                                 0.0335652109 -0.0255427962 -9.984208e-03
  :CUTPOCu
                   -0.0094069168
                                  0.0225824250 -0.0313468884 -3.545187e-02
## :SHCN
                   -0.0221898756
                                  0.0014515077 -0.0699324005
                                                              1.312836e-02
  :PRFQunk
                   -0.0167281634
                                 0.0029160871 -0.0265877088
                                                              8.028199e-04
## :PRFQ120
                   -0.0403837277 -0.0012596199 -0.0234912616
                                                              2.288779e-02
## : PRFQ15
                   -0.0631739978 -0.0116909539 -0.0107225817
                                                              2.326398e-02
## : PRFQ30
                   -0.1717145967 -0.0110659963
                                                0.0071589545
                                                              7.196250e-02
  :PRFQ60
                   -0.0729332168 -0.0216995564
                                                0.0052102965
                                                              6.144746e-03
  :PRFQ5
                              NA
                                            NA
                                                          NA
                                                                        NA
  :PRFQ15-20
                     0.0369031507
                                  0.0360625882 -0.1510749688
                                                              2.399358e-03
                                       :WCTPOWc
                                                    : CUTPFCu
                                                                   : CUTPLCu
                       : WCTPAmnWC
## PRI:(Intercept)
                   -0.0283215784 -0.0139798088 -7.043715e-03 -0.0221363174
## PRI:log(YRIN)
                     0.0013884711 -0.0001469341
                                                8.214178e-05
                                                              0.0006033023
## PRI:log(AGEN)
                    -0.0010086632 -0.0059107704
                                                1.564950e-03
                                                              0.0062948271
## PRI:log(HGA1)
                     0.0172199348
                                  0.0293769380
                                                1.937328e-03 -0.0031191147
## PRI:LOIBelow T6
                                                1.994890e-04 -0.0043907610
                   -0.0013649702
                                  0.0051240822
## PRI: ASIAComplete -0.0071882056 -0.0095253395 -1.698348e-03
                                                              0.0024156606
## PRI:BEDBHPTL
                    -0.0016261794 -0.0002894618
                                                1.177243e-03
                                                              0.0011641916
## PRI:BEDBSTD
                     0.0030641290
                                  0.0064185527
                                                2.622334e-03
                                                              0.0034126047
## PRI:MATTAFM
                   -0.0027939670 -0.0004253981 -7.158586e-04 -0.0018188895
## PRI:MATTOM
                     0.0019246520
                                  0.0074479443
                                                1.469118e-03 -0.0017919339
## PRI:MATTSFM
                    0.0039106709
                                                4.458311e-04
                                                              0.0004235654
                                  0.0037451760
## PRI:WCTPMWc
                   -0.0124150802 -0.0105198287
                                                1.109135e-03
                                                              0.0014678854
## PRI:WCTPTRWc
                    0.0008241763 -0.0028141349
                                                3.423773e-03 -0.0002090100
## PRI:WCTPAmnWC
                   -0.0719072007 -0.0180586102 -3.192094e-03 -0.0052517492
## PRI:WCTPOWc
                   -0.0180586102 -0.1324211494 -3.309366e-04 0.0029516529
## PRI:CUTPFCu
                   -0.0031920940 -0.0003309366 -1.046832e-02 -0.0048296218
## PRI:CUTPLCu
                   ## PRI:CUTPNoCu
                    0.0535149793
                                  0.0094386299 -4.169735e-03 -0.0003118424
                   ## PRI:CUTPOCu
```

```
## PRI:SHCN
                     ## PRI:PRFQunk
                     0.0064989477 -0.0096774179 -1.861942e-03
                                                               0.0045688902
## PRI:PRFQ120
                     0.0014497824 -0.0187012324 -3.076139e-03
                                                               0.0006615315
## PRI:PRFQ15
                     0.0036865264 -0.0162244538 -2.058221e-03
                                                               0.0013085547
## PRI:PRFQ30
                     0.0040280817 -0.0157695746 -2.471495e-03
                                                               0.0013564412
## PRI:PRFQ60
                     0.0007785138 -0.0194155635
                                                 1.079030e-03
                                                               0.0043664306
## PRI:PRFQ5
                               NΑ
                                             NA
                                                           NΑ
                                                                         NΑ
## PRI:PRFQ15-20
                     0.0185535719
                                   0.0081286069 -3.681948e-03 -0.0057172485
  :(Intercept)
                     0.2441441152
                                   0.1205119295
                                                6.071983e-02
                                                               0.1908245207
  :log(YRIN)
                    -0.0119692141
                                   0.0012666351 -7.080973e-04 -0.0052007236
  :log(AGEN)
                     0.0086951077
                                   0.0509533682 -1.349054e-02 -0.0542641012
## :log(HGA1)
                    -0.1484432005 -0.2532417669 -1.670060e-02
                                                              0.0268881025
## :LOIBelow T6
                     0.0117666272 -0.0441717794 -1.719680e-03
                                                               0.0378502374
                     0.0619654056
## :ASIAComplete
                                  0.0821124993 1.464048e-02 -0.0208240269
## :BEDBHPTL
                                   0.0024952842 -1.014834e-02 -0.0100358290
                     0.0140183621
## :BEDBSTD
                    -0.0264141018 -0.0553306688 -2.260564e-02 -0.0294181116
                                   0.0036671132 6.171007e-03 0.0156796056
  :MATTAFM
                     0.0240851898
  :MATTOM
                    -0.0165913236 -0.0642044644 -1.266443e-02 0.0154472368
## :MATTSFM
                    -0.0337116549 -0.0322850186 -3.843255e-03 -0.0036513151
## :WCTPMWc
                     0.1070232998
                                  0.0906854217 -9.561218e-03 -0.0126537995
## :WCTPTRWc
                    -0.0071047525
                                  0.0242590465 -2.951439e-02
                                                              0.0018017557
## :WCTPAmnWC
                     0.6198708165
                                   0.1556729415
                                                 2.751722e-02
                                                               0.0452723238
## :WCTPOWc
                                                 2.852815e-03 -0.0254445099
                     0.1556729415
                                   1.1415269287
## : CUTPFCu
                                   0.0028528153
                                                 9.024138e-02
                                                               0.0416334049
                     0.0275172152
## : CUTPLCu
                     0.0452723238 -0.0254445099
                                                 4.163340e-02 0.5034000842
## : CUTPNoCu
                    -0.4613220032 -0.0813650251
                                                 3.594490e-02
                                                               0.0026882146
## :CUTPOCu
                     0.0157515263 -0.0034212077
                                                 4.600553e-02
                                                               0.0404446255
## :SHCN
                    -0.1015661284 -0.0298992915 -3.399263e-02 -0.0263333780
## :PRFQunk
                                  0.0834234806
                                                 1.605074e-02 -0.0393857870
                    -0.0560237081
## :PRFQ120
                    -0.0124977441
                                   0.1612126196
                                                 2.651763e-02 -0.0057026843
## : PRFQ15
                    -0.0317794342
                                   0.1398617290
                                                 1.774275e-02 -0.0112803012
  :PRFQ30
                    -0.0347237863
                                   0.1359404761
                                                 2.130534e-02 -0.0116931032
  :PRFQ60
                    -0.0067111217
                                   0.1673704587
                                                -9.301701e-03 -0.0376404990
  :PRFQ5
                               NA
                                             NA
                                                           NA
                                                                         NA
##
   :PRFQ15-20
                    -0.1599397231
                                  -0.0700720667
                                                 3.173997e-02
                                                               0.0492851266
##
                        : CUTPNoCu
                                       :CUTPOCu
                                                        :SHCN
                                                                   :PRFQunk
## PRI:(Intercept)
                     1.205247e-02
                                   4.553205e-03
                                                 0.0226360219
                                                               3.064215e-02
## PRI:log(YRIN)
                    -1.086806e-03
                                  3.013271e-04 -0.0004486076 -9.239629e-04
## PRI:log(AGEN)
                     4.618906e-03 -4.930897e-03 -0.0032418420 -3.590153e-03
                    -1.507496e-02 8.645953e-03 -0.0004593173 -1.537251e-03
## PRI:log(HGA1)
## PRI:LOIBelow T6
                   -2.606563e-03 -3.177168e-04
                                                 0.0054376405
                                                              1.073507e-03
## PRI:ASIAComplete
                                  1.731267e-03
                                                 0.0031356226 -1.596550e-04
                   2.796831e-03
## PRI:BEDBHPTL
                    -2.850342e-05
                                   1.255485e-03 -0.0045936859
                                                               3.126911e-03
## PRI:BEDBSTD
                    -1.065818e-03
                                  7.406581e-03
                                                 0.0015923740
                                                               3.514465e-03
## PRI:MATTAFM
                    -4.712598e-04
                                   1.317174e-03
                                                 0.0027809212
                                                               6.561020e-04
## PRI:MATTOM
                    -2.617405e-03
                                   1.091236e-03
                                                 0.0025741038
                                                               1.940526e-03
## PRI:MATTSFM
                    -3.893683e-03 -2.619641e-03 -0.0001683800 -3.382764e-04
## PRI:WCTPMWc
                     2.963054e-03
                                   3.636350e-03
                                                 0.0081124051
                                                              3.084268e-03
## PRI:WCTPTRWc
                     1.158203e-03
                                  4.112542e-03 -0.0015229366 -9.312994e-05
## PRI:WCTPAmnWC
                     5.351498e-02 -1.827233e-03
                                                 0.0117820291
                                                              6.498948e-03
## PRI:WCTPOWc
                                                 0.0034684233 -9.677418e-03
                     9.438630e-03
                                  3.968722e-04
## PRI:CUTPFCu
                    -4.169735e-03 -5.336803e-03
                                                 0.0039432645 -1.861942e-03
## PRI:CUTPLCu
                    -3.118424e-04 -4.691719e-03
                                                 0.0030547647 4.568890e-03
## PRI:CUTPNoCu
                    -6.813246e-02 -1.790960e-03 0.0023375728 -4.339702e-03
```

```
## PRI:CUTPOCu
                    -1.790960e-03 -3.245109e-02 -0.0008056390 3.368514e-05
## PRI:SHCN
                     2.337573e-03 -8.056390e-04 -0.0215013229 -3.556819e-03
## PRI:PRFQunk
                    -4.339702e-03 3.368514e-05 -0.0035568188 -1.808451e-02
## PRI:PRFQ120
                     2.534845e-03 -1.921349e-03 -0.0070587344 -1.497180e-02
## PRI:PRFQ15
                     2.878282e-03 -4.180621e-05 -0.0033313183 -1.404429e-02
## PRI:PRFQ30
                                  1.085338e-02 -0.0102549980 -1.732688e-02
                    -1.891055e-03
                                   5.264971e-03 -0.0094344511 -1.432686e-02
## PRI:PRFQ60
                     4.012181e-03
## PRI:PRFQ5
                                              NΑ
                                                            NΑ
## PRI:PRFQ15-20
                    -6.547117e-03 -7.000081e-03 -0.0134346731 -1.574763e-02
  :(Intercept)
                    -1.038974e-01 -3.925058e-02 -0.1951321876 -2.641485e-01
  :log(YRIN)
                     9.368733e-03 -2.597569e-03
                                                 0.0038671889
                                                                7.964956e-03
  :log(AGEN)
                    -3.981694e-02 4.250644e-02
                                                  0.0279460640
                                                                3.094865e-02
  :log(HGA1)
                     1.299526e-01 -7.453181e-02
                                                 0.0039595115
                                                                1.325176e-02
  :LOIBelow T6
                     2.246969e-02 2.738855e-03 -0.0468747865 -9.254091e-03
                    -2.410988e-02 -1.492426e-02 -0.0270304071
  :ASIAComplete
                                                                1.376294e-03
## :BEDBHPTL
                     2.457116e-04 -1.082282e-02 0.0395995368 -2.695531e-02
  :BEDBSTD
                     9.187811e-03 -6.384789e-02 -0.0137269444 -3.029619e-02
##
  :MATTAFM
                     4.062461e-03 -1.135460e-02 -0.0239727295 -5.655880e-03
                     2.256315e-02 -9.406917e-03 -0.0221898756 -1.672816e-02
  : MATTOM
## :MATTSFM
                     3.356521e-02
                                   2.258243e-02 0.0014515077
                                                                2.916087e-03
## :WCTPMWc
                    -2.554280e-02 -3.134689e-02 -0.0699324005 -2.658771e-02
## :WCTPTRWc
                    -9.984208e-03 -3.545187e-02 0.0131283648
                                                                8.028199e-04
## :WCTPAmnWC
                                  1.575153e-02 -0.1015661284 -5.602371e-02
                    -4.613220e-01
  :WCTPOWc
                    -8.136503e-02 -3.421208e-03 -0.0298992915
                                                                8.342348e-02
## : CUTPFCu
                     3.594490e-02 4.600553e-02 -0.0339926264
                                                                1.605074e-02
## : CUTPLCu
                     2.688215e-03
                                   4.044463e-02 -0.0263333780 -3.938579e-02
## : CUTPNoCu
                                   1.543884e-02 -0.0201508772
                                                                3.741008e-02
                     5.873309e-01
## : CUTPOCu
                     1.543884e-02
                                   2.797423e-01
                                                  0.0069449525 -2.903803e-04
## :SHCN
                                                  0.1853505971
                    -2.015088e-02
                                   6.944953e-03
                                                                3.066130e-02
                                                                1.558962e-01
## :PRFQunk
                     3.741008e-02 -2.903803e-04
                                                  0.0306612988
## :PRFQ120
                    -2.185145e-02
                                   1.656285e-02
                                                  0.0608493091
                                                                1.290633e-01
## : PRFQ15
                    -2.481202e-02
                                   3.603874e-04
                                                  0.0287173883
                                                                1.210678e-01
  :PRFQ30
                     1.630170e-02 -9.356081e-02
                                                  0.0884024673
                                                                1.493651e-01
                    -3.458672e-02 -4.538630e-02
  :PRFQ60
                                                  0.0813290028
                                                                1.235037e-01
   :PRFQ5
                               NA
                                              NA
                                                            NA
                                                                           NA
  :PRFQ15-20
                     5.643895e-02
                                   6.034369e-02
                                                  0.1158126266
                                                                1.357513e-01
##
##
                         :PRFQ120
                                         :PRFQ15
                                                      :PRFQ30
                                                                     :PRFQ60 :PRFQ5
                                                  0.022164045
                                                               0.0132528708
## PRI:(Intercept)
                    -0.0127129966
                                   1.513930e-02
                                                                                 ΝA
## PRI:log(YRIN)
                    -0.0013876652 -6.822386e-04 -0.001031290 -0.0005292415
                                                                                 NA
                     0.0007979539 -2.615787e-03
## PRI:log(AGEN)
                                                 0.001301229 -0.0059073527
                                                                                 NA
## PRI:log(HGA1)
                                   5.020461e-03 -0.004309998
                     0.0161170064
                                                               0.0150264719
                                                                                 NA
## PRI:LOIBelow T6
                     0.0020593933
                                   2.059428e-03
                                                 0.002311204
                                                               0.0033469275
                                                                                 NΑ
## PRI:ASIAComplete -0.0032709245 -3.492304e-03 -0.002146507 -0.0036121014
                                                                                 NA
## PRI:BEDBHPTL
                                   2.802908e-03
                                                 0.001348951
                                                               0.0015853367
                                                                                 NA
                     0.0026339940
## PRI:BEDBSTD
                     0.0061482624
                                   5.290206e-03
                                                  0.007436390
                                                               0.0047323641
                                                                                 NA
## PRI:MATTAFM
                     0.0016054411
                                   3.016024e-03
                                                  0.002306009
                                                               0.0030698428
                                                                                 NA
## PRI:MATTOM
                     0.0046846548
                                   7.328407e-03
                                                  0.019919499
                                                               0.0084605104
                                                                                 NA
## PRI:MATTSFM
                     0.0001461203
                                   1.356192e-03
                                                  0.001283695
                                                               0.0025172251
                                                                                 NA
## PRI:WCTPMWc
                     0.0027250692
                                   1.243857e-03 -0.000830464 -0.0006044128
                                                                                 NA
## PRI:WCTPTRWc
                    -0.0026550642 -2.698704e-03 -0.008347904 -0.0007128122
                                                                                 NA
                                  3.686526e-03 0.004028082
## PRI:WCTPAmnWC
                     0.0014497824
                                                               0.0007785138
                                                                                 NA
## PRI:WCTPOWc
                    -0.0187012324 -1.622445e-02 -0.015769575 -0.0194155635
                                                                                 NA
## PRI:CUTPFCu
                    -0.0030761387 -2.058221e-03 -0.002471495
                                                               0.0010790302
                                                                                 ΝA
                     0.0006615315 1.308555e-03 0.001356441 0.0043664306
## PRI:CUTPLCu
```

```
## PRI:CUTPNoCu
                     NA
## PRI:CUTPOCu
                    -0.0019213487 -4.180621e-05 0.010853384
                                                                                NΑ
                                                              0.0052649706
## PRI:SHCN
                    -0.0070587344 -3.331318e-03 -0.010254998 -0.0094344511
                                                                                NA
## PRI:PRFQunk
                    -0.0149717977 -1.404429e-02 -0.017326884 -0.0143268643
                                                                                NA
## PRI:PRFQ120
                    -0.0405866904 -1.845277e-02 -0.021314558 -0.0204296831
                                                                                NΑ
## PRI:PRFQ15
                    -0.0184527747 -2.319613e-02 -0.021294778 -0.0168940195
                                                                                NA
## PRI:PRFQ30
                    -0.0213145585 -2.129478e-02 -0.094990589 -0.0254539102
                                                                                NA
                    -0.0204296831 -1.689402e-02 -0.025453910 -0.0477661002
## PRI:PRFQ60
                                                                                NA
## PRI:PRFQ5
                               NA
                                             NA
                                                           NA
                                                                         ΝA
                                                                                NA
                    -0.0155328756 -1.108602e-02 -0.014550344 -0.0104161912
## PRI:PRFQ15-20
                                                                                NA
  :(Intercept)
                     0.1095914664 -1.305073e-01 -0.191063545 -0.1142454132
                                                                                NA
  :log(YRIN)
                                   5.881188e-03 0.008890165
                                                                                NA
                     0.0119622674
                                                              0.0045622882
  :log(AGEN)
                    -0.0068787042
                                   2.254920e-02 -0.011217153
                                                              0.0509239058
                                                                                NA
  :log(HGA1)
                    -0.1389354862 -4.327852e-02 0.037154030 -0.1295346126
                                                                                NA
## :LOIBelow T6
                    -0.0177528512 -1.775315e-02 -0.019923569 -0.0288519462
                                                                                NA
## :ASIAComplete
                     0.0281967677
                                   3.010515e-02 0.018503806
                                                              0.0311378585
                                                                                NA
  :BEDBHPTL
                    -0.0227061543 -2.416226e-02 -0.011628537 -0.0136662803
                                                                                NA
## :BEDBSTD
                    -0.0530006505 -4.560384e-02 -0.064104865 -0.0407950019
                                                                                NA
  :MATTAFM
                    -0.0138395890 -2.599942e-02 -0.019878783 -0.0264633572
                                                                                NA
  : MATTOM
                    -0.0403837277 -6.317400e-02 -0.171714597 -0.0729332168
                                                                                NA
##
  :MATTSFM
                    -0.0012596199 -1.169095e-02 -0.011065996 -0.0216995564
                                                                                NA
  :WCTPMWc
                    -0.0234912616 -1.072258e-02
                                                 0.007158954
                                                              0.0052102965
                                                                                NΑ
## :WCTPTRWc
                                  2.326398e-02
                                                                                NA
                     0.0228877882
                                                 0.071962504
                                                              0.0061447457
  :WCTPAmnWC
                    -0.0124977441 -3.177943e-02 -0.034723786 -0.0067111217
                                                                                NA
## :WCTPOWc
                     0.1612126196
                                   1.398617e-01 0.135940476 0.1673704587
                                                                                NA
## : CUTPFCu
                     0.0265176311
                                   1.774275e-02
                                                 0.021305341 -0.0093017014
                                                                                NA
## :CUTPLCu
                    -0.0057026843 -1.128030e-02 -0.011693103 -0.0376404990
                                                                                NA
## : CUTPNoCu
                    -0.0218514512 -2.481202e-02
                                                 0.016301704 -0.0345867188
                                                                                NA
## :CUTPOCu
                                   3.603874e-04 -0.093560807 -0.0453862976
                                                                                NA
                     0.0165628471
## :SHCN
                     0.0608493091
                                   2.871739e-02
                                                 0.088402467
                                                               0.0813290028
                                                                                NA
## :PRFQunk
                     0.1290632975
                                   1.210678e-01
                                                 0.149365147
                                                               0.1235036960
                                                                                NA
  :PRFQ120
                     0.3498746256
                                   1.590708e-01
                                                 0.183740608
                                                               0.1761126039
                                                                                NA
  :PRFQ15
                     0.1590708078
                                   1.999605e-01
                                                 0.183570092
                                                               0.1456336718
                                                                                NA
  :PRFQ30
                     0.1837406075
                                   1.835701e-01
                                                 0.818859494
                                                               0.2194235899
                                                                                NA
  :PRFQ60
                     0.1761126039
                                   1.456337e-01
                                                 0.219423590
                                                               0.4117642072
                                                                                NA
  :PRFQ5
                                                                                NA
##
                               NΑ
                                             NΑ
                                                           NΑ
                                                                         NΑ
##
   :PRFQ15-20
                     0.1339000294
                                   9.556622e-02
                                                 0.125430188
                                                               0.0897920215
                                                                                NA
##
                       :PRFQ15-20
## PRI:(Intercept)
                     0.0123924439
## PRI:log(YRIN)
                    -0.0006522146
## PRI:log(AGEN)
                     0.0030407636
## PRI:log(HGA1)
                    -0.0078807017
## PRI:LOIBelow T6
                    -0.0018117765
## PRI:ASIAComplete
                     0.0111897380
## PRI:BEDBHPTL
                     0.0052960437
## PRI:BEDBSTD
                     0.0063876085
## PRI:MATTAFM
                    -0.0012549465
## PRI:MATTOM
                    -0.0042808956
## PRI:MATTSFM
                    -0.0041833874
## PRI:WCTPMWc
                     0.0175252292
## PRI:WCTPTRWc
                    -0.0002783340
## PRI:WCTPAmnWC
                     0.0185535719
## PRI:WCTPOWc
                     0.0081286069
## PRI:CUTPFCu
                    -0.0036819484
```

```
## PRI:CUTPLCu
                    -0.0057172485
## PRI:CUTPNoCu
                    -0.0065471175
## PRI:CUTPOCu
                    -0.0070000808
## PRI:SHCN
                    -0.0134346731
## PRI:PRFQunk
                    -0.0157476329
## PRI:PRFQ120
                    -0.0155328756
## PRI:PRFQ15
                    -0.0110860185
## PRI:PRFQ30
                    -0.0145503441
## PRI:PRFQ60
                    -0.0104161912
## PRI:PRFQ5
                                NA
## PRI:PRFQ15-20
                    -0.1377255979
## :(Intercept)
                    -0.1068281651
## :log(YRIN)
                     0.0056223685
## :log(AGEN)
                    -0.0262126827
## :log(HGA1)
                     0.0679350185
## :LOIBelow T6
                     0.0156182879
## :ASIAComplete
                    -0.0964603257
## :BEDBHPTL
                    -0.0456541611
## :BEDBSTD
                    -0.0550639169
## :MATTAFM
                     0.0108181756
## :MATTOM
                     0.0369031507
## :MATTSFM
                     0.0360625882
## :WCTPMWc
                    -0.1510749688
## :WCTPTRWc
                      0.0023993581
## :WCTPAmnWC
                    -0.1599397231
## :WCTPOWc
                    -0.0700720667
## :CUTPFCu
                     0.0317399699
## : CUTPLCu
                     0.0492851266
## : CUTPNoCu
                     0.0564389519
## : CUTPOCu
                     0.0603436892
## :SHCN
                     0.1158126266
## :PRFQunk
                     0.1357513292
## :PRFQ120
                     0.1339000294
## :PRFQ15
                     0.0955662195
## : PRFQ30
                      0.1254301880
## :PRFQ60
                     0.0897920215
## :PRFQ5
                                NA
## :PRFQ15-20
                     1.1872535428
```