Dose-Time Response Modeling of Rat RBC AChE Activity: Carbaryl Gavage Dosing

June 29, 2005

1 Preamble

Here is some code to set up the analysis: loading required libraries and datasets, and defining some functions.

First, `CarbamateData` loads the full dataset for this risk assessment, and causes the library `DRUtils` to be loaded.

```
> options(width = 80)
> library(CarbamateData)
```

```
Loading required package: DRUtils
Loading required package: nlme
Loading required package: tcltk
```

Set up lattice to use B&W instead of color:

```
> library(lattice)
> ltheme <- canonical.theme(color = FALSE)
> ltheme$strip.background$col <- "transparent"
> lattice.options(default.theme = ltheme)
```

Use package `Hmisc` for some formatting support.

```
> library(Hmisc)
```

```
Hmisc library by Frank E Harrell Jr

Type library(help='Hmisc'), ?Overview, or ?Hmisc.Overview')
to see overall documentation.

NOTE:Hmisc no longer redefines [.factor to drop unused levels when
subsetting.  To get the old behavior of Hmisc type dropUnusedLevels().

Attaching package 'Hmisc':


        The following object(s) are masked from package:stats :

         ecdf
```

All the rat gavage data for this analysis are in `AggData`. The following code prints out documentation for the datasets in use:

```
> printDataDoc(AggData)
```

```
----------------------------------------
Data set: AggData

Dataset creation date: Wed Jun 22 12:07:24 2005
Script name: /home/setzer/tasks/CarbamateCRA/EmpiricalDoseResponsesFinal/Data/getdata.R
Script last modified: 2005-06-22 12:05:47
sysname: Linux
release: 2.4.24-openmosix2
version: #1 Wed Jul 28 14:33:52 CEST 2004
nodename: node24.cluster2.org
machine: i686
login: unknown
user: setzer
----------------------------------------
```

The following function turns out to be quite useful on subsetted dataframes. It just eliminates unused levels of all factors in the data frame:

```
> CleanUp <- function(x) {
+     for (nm in names(x)) {
+         if (is.factor(x[, nm]))
+             x[, nm] <- factor(x[, nm])
+     }
+     x
+ }
```

To get starting values, we often have to extract values from a previously fit model. The following function simplifies that. The argument `what` is a regular expression:

```
> getParms <- function(what, Par) {
+     Par[grep(what, names(Par))]
+ }
```

This script is for modeling the dose-time response for rat red blood cells. via gavage dosing. It includes acute and subchronic studies.

All the data used for this DR model are in `AggData` and in `PadillaData`. The carbaryl data need to be extracted from both data sets, then several variables (n = 1, sd = 0, tmonstdy = 1, mrid = "Padilla", cheact = RBC.R) added to the Padilla dataset, Cheact in the Padilla dataset rescaled by 2.5 so its values are numerically more similar to the other studies, and the two combined.

Now, set up the analysis dataset.

```
> dta <- CleanUp(subset(AggData, chemical %in% "CARBARYL" & species %in%
+     "RAT" & dsmtd %in% "GAVAGE" & sctn %in% "RBC" & !is.na(cheact) &
+     (n == 1 | !is.na(sd)) & (is.na(ta) | ta %in% c("AI")), select = c("cheact",
+     "sd", "n", "dose", "tmonstdy", "tmpstds", "sex", "mrid")))
> Pdta <- subset(PadillaData, chemical %in% "carbaryl", select = c("dose",
+     "RBC.R", "TMPSTDS"))
> names(Pdta) <- c("dose", "cheact", "tmpstds")
> Pdta$tmonstdy <- rep(1, nrow(Pdta))
> Pdta$n <- rep(1, nrow(Pdta))
> Pdta$sd <- rep(0, nrow(Pdta))
> Pdta$sex <- factor(rep("M", nrow(Pdta)))
> Pdta$mrid <- factor(rep("Padilla", nrow(Pdta)))
> Pdta$cheact <- Pdta$cheact * 2.5
> dta <- rbind(dta, Pdta[, names(dta)])
> dta <- dta[!is.na(dta$cheact), ]
```

Summary of the relevant variables in this dataset:

```
> by(dta, dta$mrid, summary)

dta$mrid: 43845202
     cheact             sd               n          dose           tmonstdy
 Min.   : 367.0   Min.   : 29.50   Min.   :3   Min.   :  0.00   Min.   :1
 1st Qu.: 497.5   1st Qu.: 72.33   1st Qu.:3   1st Qu.:  7.50   1st Qu.:1
 Median : 683.0   Median : 90.60   Median :3   Median : 30.00   Median :1
 Mean   : 681.6   Mean   :110.13   Mean   :3   Mean   : 46.25   Mean   :1
 3rd Qu.: 800.2   3rd Qu.:143.03   3rd Qu.:3   3rd Qu.: 68.75   3rd Qu.:1
 Max.   :1077.0   Max.   :282.20   Max.   :3   Max.   :125.00   Max.   :1
    tmpstds       sex          mrid
 Min.   : 0.500   F:24   43845202:48
 1st Qu.: 1.000   M:24   43845203: 0
 Median : 3.000          44122601: 0
 Mean   : 6.583          44393701: 0
 3rd Qu.: 8.000          Padilla : 0
 Max.   :24.000
------------------------------------------------------------
dta$mrid: 43845203
     cheact             sd               n              dose         tmonstdy
 Min.   : 297.0   Min.   : 54.54   Min.   :5.000   Min.   : 0.0   Min.   :1
 1st Qu.: 609.6   1st Qu.:120.45   1st Qu.:6.000   1st Qu.: 7.5   1st Qu.:1
 Median : 730.4   Median :144.26   Median :6.000   Median :20.0   Median :1
 Mean   : 722.1   Mean   :159.54   Mean   :5.969   Mean   :32.5   Mean   :1
 3rd Qu.: 921.3   3rd Qu.:196.78   3rd Qu.:6.000   3rd Qu.:45.0   3rd Qu.:1
 Max.   :1165.2   Max.   :285.74   Max.   :6.000   Max.   :90.0   Max.   :1
    tmpstds      sex          mrid
 Min.   : 1.00   F:16   43845202: 0
 1st Qu.: 6.25   M:16   43845203:32
 Median :16.00          44122601: 0
 Mean   :20.25          44393701: 0
 3rd Qu.:30.00          Padilla : 0
 Max.   :48.00
------------------------------------------------------------
dta$mrid: 44122601
     cheact             sd               n              dose
 Min.   : 283.4   Min.   : 51.55   Min.   : 6.00   Min.   : 0.00
 1st Qu.: 450.2   1st Qu.:110.68   1st Qu.:10.00   1st Qu.: 0.75
 Median : 545.0   Median :164.41   Median :10.00   Median : 5.50
 Mean   : 678.9   Mean   :161.06   Mean   :14.06   Mean   :10.25
 3rd Qu.: 938.2   3rd Qu.:196.18   3rd Qu.:14.25   3rd Qu.:15.00
 Max.   :1395.0   Max.   :334.10   Max.   :27.00   Max.   :30.00

    tmonstdy        tmpstds  sex          mrid
 Min.   :-7.00   Min.   :1   F:16   43845202: 0
 1st Qu.:19.25   1st Qu.:1   M:16   43845203: 0
 Median :42.00   Median :1          44122601:32
 Mean   :42.00   Mean   :1          44393701: 0
 3rd Qu.:64.75   3rd Qu.:1          Padilla : 0
 Max.   :91.00   Max.   :1
                 NA's   :4
------------------------------------------------------------
dta$mrid: 44393701
```

```
     cheact             sd               n          dose           tmonstdy
 Min.   : 643.2   Min.   : 14.84   Min.   :6   Min.   : 0.000   Min.   : 4.00
 1st Qu.: 888.0   1st Qu.:108.64   1st Qu.:6   1st Qu.: 0.075   1st Qu.: 6.00
 Median : 961.6   Median :160.69   Median :6   Median : 0.550   Median : 8.00
 Mean   : 985.3   Mean   :161.06   Mean   :6   Mean   : 2.775   Mean   :10.17
 3rd Qu.:1101.7   3rd Qu.:194.69   3rd Qu.:6   3rd Qu.: 3.250   3rd Qu.:15.00
 Max.   :1251.2   Max.   :333.87   Max.   :6   Max.   :10.000   Max.   :20.00
    tmpstds  sex          mrid
 Min.   :1   F:24   43845202: 0
 1st Qu.:1   M: 0   43845203: 0
 Median :1          44122601: 0
 Mean   :1          44393701:24
 3rd Qu.:1          Padilla : 0
 Max.   :1
------------------------------------------------------------
dta$mrid: Padilla
     cheact             sd          n          dose           tmonstdy
 Min.   : 166.8   Min.   :0   Min.   :1   Min.   : 0.000   Min.   :1
 1st Qu.: 523.9   1st Qu.:0   1st Qu.:1   1st Qu.: 6.375   1st Qu.:1
 Median : 760.4   Median :0   Median :1   Median :30.000   Median :1
 Mean   : 743.0   Mean   :0   Mean   :1   Mean   :21.055   Mean   :1
 3rd Qu.: 899.1   3rd Qu.:0   3rd Qu.:1   3rd Qu.:30.000   3rd Qu.:1
 Max.   :1587.2   Max.   :0   Max.   :1   Max.   :50.000   Max.   :1
    tmpstds        sex          mrid
 Min.   : 0.5000   F: 0   43845202: 0
 1st Qu.: 0.6667   M:64   43845203: 0
 Median : 0.6667          44122601: 0
 Mean   : 3.4427          44393701: 0
 3rd Qu.: 4.0000          Padilla :64
 Max.   :24.0000
```

```
> unique(subset(dta, select = c("mrid", "tmonstdy", "tmpstds")))
```

```
         mrid tmonstdy    tmpstds
332  44122601       -7         NA
336  44122601       28  1.0000000
340  44122601       56  1.0000000
344  44122601       91  1.0000000
348  44122601       -7  1.0000000
364  44393701        6  1.0000000
372  44393701       15  1.0000000
376  44393701       20  1.0000000
380  44393701        4  1.0000000
384  44393701       10  1.0000000
392  43845203        1  1.0000000
396  43845203        1  8.0000000
400  43845203        1 24.0000000
404  43845203        1 48.0000000
424  43845202        1  0.5000000
428  43845202        1  1.0000000
432  43845202        1  2.0000000
436  43845202        1  4.0000000
440  43845202        1  8.0000000
444  43845202        1 24.0000000
1     Padilla        1  0.6666667
```

```
1100  Padilla        1  0.5000000
610   Padilla        1  1.0000000
1110  Padilla        1  2.0000000
1610  Padilla        1  4.0000000
2110  Padilla        1  6.0000000
261   Padilla        1 24.0000000
```

The males in 44122601 with `tmonstdy` == -7 have a value of NA for `tmpstds`, while the corresponding females have a value of 1. Since these are pre-dosing records, and the model function cannot handle NAs, change these NAs to 1.

```
> dta$tmpstds[is.na(dta$tmpstds)] <- 1
```

Padilla's data are from an acute study, with multiple doses at one time point, and multiple timepoints for 30 mg/kg. Mrids 44122601 and 44393701 are sub-chronic studies, while 43845202 and 43845203 are acute studies. Also, in 43845203, only the 1 hour time point is likely to be useful, since AChE activity should be close to background by the next time point, 8 hours. Note the negative times in 44122601. These indicate pre-study baseline values (dose == 0). Set up a new dose variable, `dose2` that is 0 when `tmonstdy` is negative. Since this study does not involve repeated measures, these extra groups are only useful for estimating variance. Also, collapse the corresponding level of `mridXtmonstdy0` with that corresponding to the next later time point, since `lD` will have levels corresponding to that factor.

```
> dta$dose2 <- ifelse(dta$tmonstdy < 0, 0, dta$dose)
```

Create some new factors, for splitting up the background parameters and allowing groups to have different variances.

```
> dta$mridXsex <- with(dta, interaction(mrid, sex, drop = TRUE,
+     sep = ":"))
> dta$mridXtmonstdyXsex <- with(dta, interaction(mrid, tmonstdy,
+     sex, drop = TRUE, sep = ":"))
> dta$mridXtmonstdyXsexXtmpstds <- with(dta, interaction(mrid,
+     tmonstdy, sex, tmpstds, drop = TRUE, sep = ":"))
> dta$mridXtmonstdy <- with(dta, interaction(mrid, tmonstdy, drop = TRUE,
+     sep = ":"))
> dta$mridXtmonstdy0 <- dta$mridXtmonstdy
> lvls <- levels(dta$mridXtmonstdy0)
> lvls[1] <- lvls[2]
> levels(dta$mridXtmonstdy0) <- lvls
```

We can only estimate the time-course parameters (`ldT` and `lTmax`, or `lTr`) in the acute studies, and for positive doses. In particular, `ldT` tends to vary among doses, being greater for higher doses. We accomodate this by estimating a different value of `ldT` for different dose levels. We need to "borrow" information from the acute studies for the subchronic ones, so each level for which we need to have a value for `ldT` in a subchronic study must also appear in an acute study; in particular, 43825202, since there may only be one useful time point in the other acute study. Thus, we need to create a factor that lumps the doses from 43825202 in categories that capture the doses from the other studies.

These are the doses available in the different mrids (non-zero entries indicate the presence of the dose-level in the corresponding study).

```
> with(dta, table(mrid, dose, sex))

, , sex = F

          dose
mrid       0  0.1 1  3  7.5 10 15 30 50 90 125
  43845202  6  0   0  0  0   6  0  0  6  0  6
```

```
  43845203  4  0   0  0  0   4  0  4  0  4  0
  44122601  4  0   4  0  0   4  0  4  0  0  0
  44393701  6  6   6  0  0   6  0  0  0  0  0
  Padilla   0  0   0  0  0   0  0  0  0  0  0

, , sex = M

          dose
mrid       0  0.1 1  3  7.5 10 15 30 50 90 125
  43845202  6  0   0  0  0   6  0  0  6  0  6
  43845203  4  0   0  0  0   4  0  4  0  4  0
  44122601  4  0   4  0  0   4  0  4  0  0  0
  44393701  0  0   0  0  0   0  0  0  0  0  0
  Padilla  11  0   0  5  5   0  5 34  4  0  0
```

Try creating `fdose` by cutting dose at:

```
> dta$fdose <- cut(dta$dose, c(0, 10, 50, 125), include.lowest = TRUE)
```

How are the controls distributed among times post dosing?

```
> by(dta, dta$mrid, function(x) with(x, table(dose, tmpstds)))

dta$mrid: 43845202
     tmpstds
dose  0.5 1 2 4 8 24
  0   2   2 2 2 2 2
  10  2   2 2 2 2 2
  50  2   2 2 2 2 2
  125 2   2 2 2 2 2
------------------------------------------------------------
dta$mrid: 43845203
    tmpstds
dose 1 8 24 48
  0  2 2 2  2
  10 2 2 2  2
  30 2 2 2  2
  90 2 2 2  2
------------------------------------------------------------
dta$mrid: 44122601
    tmpstds
dose 1
  0  8
  1  8
  10 8
  30 8
------------------------------------------------------------
dta$mrid: 44393701
     tmpstds
dose  1
  0   6
  0.1 6
  1   6
  10  6
------------------------------------------------------------
dta$mrid: Padilla
```

```
     tmpstds
dose  0.5 0.666666666666667 1 2 4 6 24
  0   1   5                 1 1 1 1 1
  3   0   5                 0 0 0 0 0
  7.5 0   5                 0 0 0 0 0
  15  0   5                 0 0 0 0 0
  30  5   5                 5 5 5 5 4
  50  0   4                 0 0 0 0 0
```

2 Dose-Response Modeling

2.1 strategy

Use the model with simple exponential recovery (`tcmfn4()`), first. It looks as if the time to peak effect for all these chemicals is likely to be less than a half-hour (the earliest time point in this dataset), so the exponential recovery model is probably indistinguishable from the one with the more complex time course.

Fitting the model will follow these steps:

1. First, use `GetInitialValues()` to get starting values for the model against these data, and determine how finely we can estimate `lg` and `tz` of the dose-response parameters, and `lTr`, the log of the recovery half-life.

2. Next, fit `tcmfn4()` using the parameterizations determined in the previous step, and a constant variance model, allowing `lD` to vary among mrids.

   Try fitting with other variance models the same model for fixed and random effects, using AIC to identify the best variance model

3. Can we simplify the model for `lD`, that is, does `lD` differ among `tmonstdy` and sexes? Use contrasts in the best model identified in the previous section.

4. Can we simplify the model for `lTr`, first between sexes, then among doses.

2.2 Initial Values

Save the initial values so that we do not need to go through all this to re-run the analysis. Also, set the argument `delta` to 0.5, the earliest non-zero time point.

```
> formals(tcmfn4)$delta <- min(dta$tmpstds[dta$tmpstds > 0])
> initfile <- paste("initvals-RBC-DR-1.RData", sep = "")
> if (!file.exists(initfile)) {
+     lA.start <- lm(I(log(cheact)) ~ mridXtmonstdyXsexXtmpstds -
+         1, data = CleanUp(subset(dta, dose2 %in% 0)))
+     Start <- c(coef(lA.start), rep(log(3), nlevels(dta$mridXtmonstdy0)),
+         0, c(-2, 0), c(log(1), 0), rep(log(1.5), nlevels(dta$fdose) *
+             2))
+     init1 <- GetInitialValues(cbind(resp = cheact, sd = sd, n = n) ~
+         tcmfn4(dose2, tmpstds, lA = lA, tz = tz, lD = lD, lg = lg,
+             lTr = lTr), data = dta, params = list(lA ~ mridXtmonstdyXsexXtmpstds -
+         1, lD ~ mridXtmonstdy0 + sex - 1, tz ~ sex, lg ~ sex,
+         lTr ~ fdose:sex - 1), start = Start, weights = varComb(varIdent(form = ~1 |
+         mrid), varPower(value = 1)))
+     save(init1, file = initfile)
+ } else load(initfile)
> tmp <- t(init1$Redundancy[[1]]$Eigens)
> tmp <- tmp[-grep("^lA", rownames(tmp)), ]
> round(tmp[, 1:7], digits = 2)
```

```
                              [,1]  [,2]  [,3]  [,4] [,5] [,6] [,7]
CondIndex                    54.62 25.89 15.46 11.21 6.14 5.53 4.61
mu                            0.04  0.09  0.15  0.21 0.39 0.43 0.51
lD.mridXtmonstdy044122601:28  0.16  0.25  0.27  0.03 0.00 0.04 0.00
lD.mridXtmonstdy044122601:56  0.16  0.26  0.22  0.02 0.00 0.07 0.00
lD.mridXtmonstdy044122601:91  0.18  0.30  0.26  0.02 0.00 0.04 0.00
lD.mridXtmonstdy044393701:6   0.01  0.01  0.01  0.00 0.00 0.00 0.00
lD.mridXtmonstdy044393701:15  0.02  0.03  0.05  0.00 0.00 0.04 0.00
lD.mridXtmonstdy044393701:20  0.01  0.02  0.21  0.01 0.01 0.22 0.01
lD.mridXtmonstdy044393701:4   0.05  0.07  0.04  0.01 0.00 0.05 0.00
lD.mridXtmonstdy044393701:10  0.00  0.00  0.12  0.01 0.00 0.13 0.01
lD.mridXtmonstdy043845203:1   0.27  0.22  0.16  0.07 0.00 0.00 0.09
lD.mridXtmonstdy043845202:1   0.36  0.48  0.00  0.00 0.00 0.00 0.02
lD.mridXtmonstdy0Padilla:1    0.28  0.26  0.28  0.15 0.00 0.03 0.00
lD.sexM                       0.83  0.02  0.11  0.04 0.00 0.00 0.00
tz.(Intercept)                0.07  0.10  0.00  0.00 0.00 0.00 0.19
tz.sexM                       0.45  0.38  0.00  0.16 0.00 0.00 0.00
lg.(Intercept)                0.42  0.56  0.03  0.00 0.00 0.00 0.00
lg.sexM                       0.97  0.01  0.01  0.00 0.00 0.00 0.00
lTr.fdose[0,10]:sexF          0.08  0.08  0.56  0.02 0.01 0.16 0.00
lTr.fdose(10,50]:sexF         0.00  0.00  0.07  0.00 0.00 0.00 0.45
lTr.fdose(50,125]:sexF        0.00  0.00  0.00  0.00 0.00 0.00 0.23
lTr.fdose[0,10]:sexM          0.06  0.03  0.00  0.09 0.16 0.00 0.00
lTr.fdose(10,50]:sexM         0.00  0.00  0.00  0.08 0.76 0.03 0.00
lTr.fdose(50,125]:sexM        0.00  0.00  0.03  0.00 0.19 0.00 0.07
```

condition index is greater than 38, with strong loadings with the "male" effect for `lD`, and `lg`, and moderate loadings of the "male" effect for `tz` and the main effect for `lg`. Try fitting this model using gnls, first, and, if successful, use this to model the residual variance. Use the best variance model to test whether the eight kills in 44122601 differ among themselves.

```
> Start <- init1$start$beta
> idta <- init1$data
> drmod1g <- gnls(cheact ~ tcmfn4(dose2, tmpstds, lA = lA, tz = tz,
+     lD = lD, lg = lg, lTr = lTr), data = idta, params = list(lA ~
+     mridXtmonstdyXsexXtmpstds - 1, lD ~ mridXtmonstdy0 + sex -
+     1, tz ~ sex, lg ~ sex, lTr ~ fdose:sex - 1), start = Start)
```

That fails with the error:

```
Error in gnls(cheact ~ tcmfn4(dose2, tmpstds, lA = lA, tz = tz, lD = lD,  :
        Step halving factor reduced below minimum in NLS step
```

Perhaps perturbing the initial values would help?

```
> Start0 <- init1$start$beta
> idta <- init1$data
> icnt <- 1
> Maxcnt <- 20
> repeat {
+     Start <- Start0 * (1 + rnorm(length(Start0), sd = 0.2))
+     drmod1g <- try(gnls(cheact ~ tcmfn4(dose2, tmpstds, lA = lA,
+         tz = tz, lD = lD, lg = lg, lTr = lTr), data = idta, params = list(lA ~
+         mridXtmonstdyXsexXtmpstds - 1, lD ~ mridXtmonstdy0 +
+         sex - 1, tz ~ sex, lg ~ sex, lTr ~ fdose:sex - 1), start = Start),
+         silent = TRUE)
```

```
+     if (icnt > Maxcnt || !inherits(drmod1g, "try-error")) {
+         writeLines(paste("Success after", icnt, "tries."))
+         break
+     }
+     icnt <- icnt + 1
+ }

Success after 1 tries.
```

Now, do we need to allow the standard deviation to vary with study?

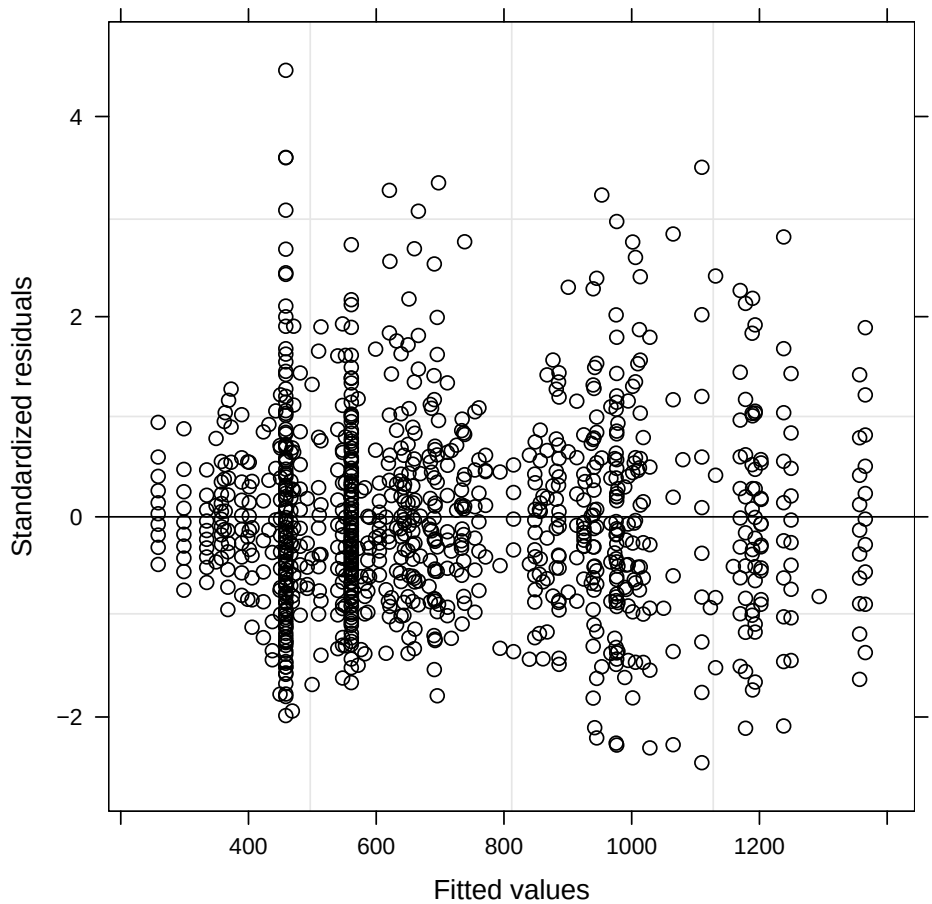
```
> Start <- Start0 <- coef(drmod1g)
> icnt <- 1
> repeat {
+     drmod2g <- try(gnls(cheact ~ tcmfn4(dose2, tmpstds, lA = lA,
+         tz = tz, lD = lD, lg = lg, lTr = lTr), data = idta, params = list(lA ~
+         mridXtmonstdyXsexXtmpstds - 1, lD ~ mridXtmonstdy0 +
+         sex - 1, tz ~ sex, lg ~ sex, lTr ~ fdose:sex - 1), weights = varIdent(form = ~1 |
+         mrid), start = Start), silent = TRUE)
+     if (!inherits(drmod2g, "try-error") || icnt > Maxcnt) {
+         if (icnt <= Maxcnt)
+             writeLines(paste("Success after", icnt, "trie(s)."))
+         else writeLines(paste("Maxcnt,", Maxcnt, "exceeded"))
+         break
+     }
+     Start <- Start0 * (1 + rnorm(length(Start0), sd = 0.2))
+     icnt <- icnt + 1
+ }

Success after 1 trie(s).

> anova(drmod1g, drmod2g)

        Model df      AIC      BIC    logLik   Test  L.Ratio p-value
drmod1g     1 63 13126.04 13434.78 -6500.019
drmod2g     2 67 13098.50 13426.85 -6482.249 1 vs 2 35.53889  <.0001
```

Yes. Plot the model, to see if there looks to be any additional trend of residual magnitude versus fitted value:



Now, try plotting versus fraction of inhibition:

```
> local({
+     Pars <- nlme:::getParsGnls(drmod2g$plist, drmod2g$pmap, coef(drmod2g),
+         length(drmod2g$residuals))
+     BG <- exp(Pars[, "lA"])
+     Inh <- 1 - fitted(drmod2g)/BG
+     plot(resid(drmod2g, type = "p") ~ Inh, xlab = "Fractional Inhibition",
+         ylab = "Pearson Residual")
+ })
```

In both plots, the residuals are somewhat skewed to larger values, but that can be ignored. These were originally all aggregated data, and a data set of individual observations was generated in which `cheact` had the same mean and standard deviation within groups as in the original data (but its distribution was derived from a log-normal, hence the skewing). Since the algorithms in `gnls()` and `nlme()` depend on data such as these only through their means and standard deviations, this is not a problem. There seems to be a trend in spread with fraction inhibition, with the variance decreasing with increasing fraction inhibition. `nlme()` does not allow this kind of modeling, so just try to model with a plain invocation of `varPower()`.

```
> Start0 <- coef(drmod2g)
> Start <- Start0
> icnt <- 1
> Maxcnt <- 30
```

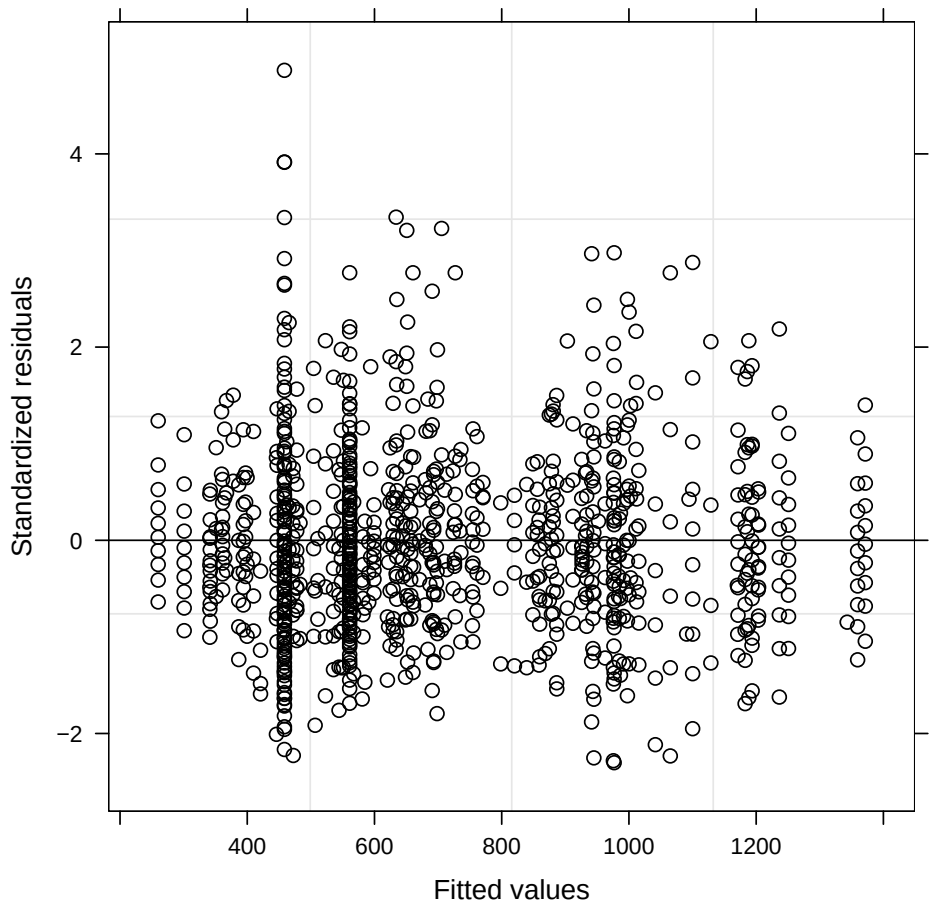
```
> repeat {
+     drmod3g <- try(gnls(cheact ~ tcmfn4(dose2, tmpstds, lA = lA,
+         tz = tz, lD = lD, lg = lg, lTr = lTr), data = idta, params = list(lA ~
+         mridXtmonstdyXsexXtmpstds - 1, lD ~ mridXtmonstdy0 +
+         sex - 1, tz ~ sex, lg ~ sex, lTr ~ fdose:sex - 1), weights = varComb(varIdent(form = ~1 |
+         mrid), varPower(form = ~fitted(.))), start = Start),
+         silent = TRUE)
+     if (!inherits(drmod3g, "try-error") || icnt > Maxcnt) {
+         if (icnt <= Maxcnt)
+             writeLines(paste("Success after", icnt, "trie(s)."))
+         else writeLines(paste("Maxcnt,", Maxcnt, "exceeded"))
+         break
+     }
+     Start <- Start0 * (1 + rnorm(length(Start0), sd = 0.2))
+     icnt <- icnt + 1
+ }

Success after 1 trie(s).

> anova(drmod2g, drmod3g)

        Model df      AIC      BIC    logLik   Test  L.Ratio p-value
drmod2g     1 67 13098.50 13426.85 -6482.249
drmod3g     2 68 13079.57 13412.82 -6471.783 1 vs 2 20.93331  <.0001
```

Again, this is s significant improvement. Residual plots, as above:



Now, try plotting versus fraction of inhibition:

```
> local({
+     Pars <- nlme:::getParsGnls(drmod3g$plist, drmod3g$pmap, coef(drmod3g),
+         length(drmod3g$residuals))
+     BG <- exp(Pars[, "lA"])
+     Inh <- 1 - fitted(drmod3g)/BG
+     print(xyplot(resid(drmod3g, type = "p") ~ Inh | idta$mrid,
+         xlab = "Fractional Inhibition", ylab = "Pearson Residual"))
+ })
```

That looks pretty good. Hopefully, we'll be able to fit the more complicated mixed effects models with this weight function.

Here is a summary of the interesting fitted values for that model:

```
> nms <- names(coef(drmod3g))
> summary(drmod3g)$tTable[-grep("^lA", nms), ]

                                  Value Std.Error    t-value      p-value
lD.mridXtmonstdy044122601:28  1.6664256 0.2959008  5.6317044 2.362537e-08
lD.mridXtmonstdy044122601:56  1.5283091 0.2853908  5.3551454 1.077418e-07
lD.mridXtmonstdy044122601:91  1.7203683 0.2870154  5.9939935 2.924972e-09
lD.mridXtmonstdy044393701:6   3.0912965 1.3240087  2.3348008 1.976559e-02
```

```
lD.mridXtmonstdy044393701:15  2.2105587 0.5118473  4.3187852 1.737242e-05
lD.mridXtmonstdy044393701:20  1.3557509 0.2901733  4.6722113 3.418581e-06
lD.mridXtmonstdy044393701:4   1.9581618 0.4686038  4.1787153 3.207608e-05
lD.mridXtmonstdy044393701:10  1.3238618 0.3209112  4.1253209 4.033503e-05
lD.mridXtmonstdy043845203:1   1.3345404 0.3601709  3.7052982 2.235886e-04
lD.mridXtmonstdy043845202:1   2.8268524 0.2603552 10.8576775 6.092899e-26
lD.mridXtmonstdy0Padilla:1    1.9184859 0.5030655  3.8135910 1.459839e-04
lD.sexM                      -1.0432529 0.7026850 -1.4846666 1.379707e-01
tz.(Intercept)               -0.3700245 0.2361709 -1.5667660 1.175092e-01
tz.sexM                       0.2810258 0.4302950  0.6531002 5.138529e-01
lg.(Intercept)                0.3600206 0.2045821  1.7597851 7.877264e-02
lg.sexM                      -0.6141488 0.3441352 -1.7846148 7.464935e-02
lTr.fdose[0,10]:sexF          2.0383191 0.7990350  2.5509761 1.090114e-02
lTr.fdose(10,50]:sexF         2.3152375 0.3055956  7.5761482 8.578481e-14
lTr.fdose(50,125]:sexF        2.3823213 0.2335337 10.2011880 3.096770e-23
lTr.fdose[0,10]:sexM          1.3489844 0.8878182  1.5194377 1.289919e-01
lTr.fdose(10,50]:sexM         1.8821233 0.4124031  4.5637951 5.696327e-06
lTr.fdose(50,125]:sexM        2.5824292 0.3349190  7.7106083 3.209826e-14
```

Notice that the male effects for `lD`, `tz`, and `lg` are not significant (using $\alpha = 0.05$). We'll check this again in the mixed effects model. Do the estimates of `lD` from 44122601 and 44393701 vary significantly among themselves?

```
> nms <- names(coef(drmod3g))
> lDnmindx <- grep("^lD.*((44122601)|(44393701))", nms)
> lDnms <- nms[lDnmindx]
> L <- matrix(0, nrow = length(lDnms) - 2, ncol = length(lDnms),
+     dimnames = list(NULL, lDnms))
> nmindx1 <- grep("44122601", lDnms)
> nmindx2 <- grep("44393701", lDnms)
> for (i in 1:(length(nmindx1) - 1)) {
+     L[i, (1:length(nmindx1))] <- -1/length(nmindx1)
+     L[i, i] <- L[i, i] + 1
+ }
> for (j in 1:(length(nmindx2) - 1)) {
+     i <- j + length(nmindx1)
+     L[i - 1, length(nmindx1) + (1:length(nmindx2))] <- -1/length(nmindx2)
+     L[i - 1, i] <- L[i - 1, i] + 1
+ }
> anova(drmod3g, L = L)
```

```
Denom. DF: 931
 F-test for linear combination(s)
  lD.mridXtmonstdy044122601:28 lD.mridXtmonstdy044122601:56
1                    0.6666667                   -0.3333333
2                   -0.3333333                    0.6666667
3                    0.0000000                    0.0000000
4                    0.0000000                    0.0000000
5                    0.0000000                    0.0000000
6                    0.0000000                    0.0000000
  lD.mridXtmonstdy044122601:91 lD.mridXtmonstdy044393701:6
1                   -0.3333333                         0.0
2                   -0.3333333                         0.0
3                    0.0000000                         0.8
4                    0.0000000                        -0.2
5                    0.0000000                        -0.2
```

```
6                    0.0000000                        -0.2
  lD.mridXtmonstdy044393701:15 lD.mridXtmonstdy044393701:20
1                         0.0                          0.0
2                         0.0                          0.0
3                        -0.2                         -0.2
4                         0.8                         -0.2
5                        -0.2                          0.8
6                        -0.2                         -0.2
  lD.mridXtmonstdy044393701:4 lD.mridXtmonstdy044393701:10
1                        0.0                          0.0
2                        0.0                          0.0
3                       -0.2                         -0.2
4                       -0.2                         -0.2
5                       -0.2                         -0.2
6                        0.8                         -0.2
  numDF   F-value p-value
1     6 0.8604719  0.5235
```

No, so we can set up a random effects model where subject is just mrid.

Fit the same model as above, except just allow `lD` to vary among sexes. Also, add an indicator for the Padilla study:

```
> Par <- coef(drmod3g)
> lDpar <- getParms("^lD", Par)
> lD.sexF <- mean(lDpar[grep("mrid.*stdy0[0-9]", names(lDpar))])
> idta$Padilla <- with(idta, ifelse(mrid == "Padilla", 1, 0))
> Start0 <- c(getParms("^lA", Par), c(lD.sexF, getParms("lD\\.sexM",
+     Par), 0), getParms("^tz", Par), getParms("^lg", Par), getParms("^lTr",
+     Par))
> Start <- list(fixed = Start0)
> icnt <- 1
> Maxcnt <- 30
> repeat {
+     drmod4 <- try(nlme(cheact ~ tcmfn4(dose2, tmpstds, lA = lA,
+         tz = tz, lD = lD, lg = lg, lTr = lTr), data = idta, fixed = list(lA ~
+         mridXtmonstdyXsexXtmpstds - 1, lD ~ sex + Padilla, tz ~
+         sex, lg ~ sex, lTr ~ fdose:sex - 1), random = lD ~ 1 |
+         mrid, weights = varComb(varIdent(form = ~1 | mrid), varPower()),
+         start = Start), silent = TRUE)
+     if (!inherits(drmod4, "try-error") || icnt > Maxcnt) {
+         if (icnt <= Maxcnt)
+             writeLines(paste("Success after", icnt, "trie(s)."))
+         else writeLines(paste("Maxcnt,", Maxcnt, "exceeded"))
+         break
+     }
+     Start <- list(fixed = Start0 * (1 + rnorm(length(Start0),
+         sd = 0.2)))
+     icnt <- icnt + 1
+ }
```

```
Success after 1 trie(s).
```

The interesting fitted values:

```
> nms <- names(fixed.effects(drmod4))
> summary(drmod4)$tTable[-grep("^lA", nms), ]
```

```
                            Value Std.Error  DF     t-value      p-value
lD.(Intercept)          1.94203271 0.3160977 936  6.14377401 1.190393e-09
lD.sexM                -1.05388522 0.7112992 936 -1.48163417 1.387742e-01
lD.Padilla              0.02282798 0.7058857 936  0.03233948 9.742082e-01
tz.(Intercept)         -0.35141713 0.2231478 936 -1.57481752 1.156365e-01
tz.sexM                 0.33739446 0.4167403 936  0.80960370 4.183737e-01
lg.(Intercept)          0.36142366 0.1949371 936  1.85405316 6.404597e-02
lg.sexM                -0.59685138 0.3540474 936 -1.68579515 9.216855e-02
lTr.fdose[0,10]:sexF    2.11595958 0.8609016 936  2.45784125 1.415781e-02
lTr.fdose(10,50]:sexF   2.29010743 0.3109981 936  7.36373477 3.917622e-13
lTr.fdose(50,125]:sexF  2.37877139 0.2357386 936 10.09071550 8.465568e-23
lTr.fdose[0,10]:sexM    1.33528905 0.9080963 936  1.47042673 1.417823e-01
lTr.fdose(10,50]:sexM   1.86139374 0.4160892 936  4.47354497 8.638374e-06
lTr.fdose(50,125]:sexM  2.59856547 0.3407484 936  7.62605441 5.938625e-14
```

Note, particularly, that none of the "male" effects are significant, nor is there an apparent difference in `lD` between the Padilla study and the others. Test for the effects jointly:

```
> L <- diag(4)
> dimnames(L) = list(NULL, c("lD.sexM", "lD.Padilla", "tz.sexM",
+     "lg.sexM"))
> anova(drmod4, L = L)

F-test for linear combination(s)
  lD.sexM lD.Padilla tz.sexM lg.sexM
1       1          0       0       0
2       0          1       0       0
3       0          0       1       0
4       0          0       0       1
  numDF denDF  F-value p-value
1     4   936 2.845652  0.0231
```

Try just the first three:

```
> anova(drmod4, L = L[1:3, 1:3])

F-test for linear combination(s)
  lD.sexM lD.Padilla tz.sexM
1       1          0       0
2       0          1       0
3       0          0       1
  numDF denDF  F-value p-value
1     3   936 1.556380  0.1985
```

Or, the last three:

```
> anova(drmod4, L = L[2:4, 2:4])

F-test for linear combination(s)
  lD.Padilla tz.sexM lg.sexM
1          1       0       0
2          0       1       0
3          0       0       1
  numDF denDF  F-value p-value
1     3   936 3.234461  0.0217
```

How about the last two?

```
> anova(drmod4, L = L[3:4, 3:4])

F-test for linear combination(s)
  tz.sexM lg.sexM
1       1       0
2       0       1
  numDF denDF F-value p-value
1     2   936 4.84936   0.008
```

So, there may be a sex difference in the shapes of the curves. Now, finally, do the half-lives differ between the sexes?

```
> L <- cbind(diag(3), -diag(3))
> dimnames(L) <- list(NULL, names(fixed.effects(drmod4))[grep("^lTr",
+     names(fixed.effects(drmod4)))])
> anova(drmod4, L = L)

F-test for linear combination(s)
  lTr.fdose[0,10]:sexF lTr.fdose(10,50]:sexF lTr.fdose(50,125]:sexF
1                    1                     0                      0
2                    0                     1                      0
3                    0                     0                      1
  lTr.fdose[0,10]:sexM lTr.fdose(10,50]:sexM lTr.fdose(50,125]:sexM
1                   -1                     0                      0
2                    0                    -1                      0
3                    0                     0                     -1
  numDF denDF   F-value p-value
1     3   936 0.5393986  0.6554
```

No, so refit the data with the simpler term for `lD` and no sex differences in log half-life:

```
> Par <- fixed.effects(drmod4)
> Start0 <- c(getParms("^lA", Par), Par["lD.(Intercept)"], getParms("^tz",
+     Par), getParms("^lg", Par), getParms("^lTr.*sexF", Par))
> Start <- list(fixed = Start0)
> icnt <- 1
> Maxcnt <- 30
> repeat {
+     drmod5 <- try(nlme(cheact ~ tcmfn4(dose2, tmpstds, lA = lA,
+         tz = tz, lD = lD, lg = lg, lTr = lTr), data = idta, fixed = list(lA ~
+         mridXtmonstdyXsexXtmpstds - 1, lD ~ 1, tz ~ sex, lg ~
+         sex, lTr ~ fdose - 1), random = lD ~ 1 | mrid, weights = varComb(varIdent(form = ~1 |
+         mrid), varPower()), start = Start), silent = TRUE)
+     if (!inherits(drmod5, "try-error") || icnt > Maxcnt) {
+         if (icnt <= Maxcnt)
+             writeLines(paste("Success after", icnt, "trie(s)."))
+         else writeLines(paste("Maxcnt,", Maxcnt, "exceeded"))
+         break
+     }
+     Start <- list(fixed = Start0 * (1 + rnorm(length(Start0),
+         sd = 0.2)))
+     icnt <- icnt + 1
+ }

Success after 1 trie(s).
```

```
> Ints <- intervals(drmod5, which = "fixed")$fixed
> Ints90 <- intervals(drmod5, which = "fixed", level = 0.9)$fixed
> tTab <- summary(drmod5)$tTable
> summary(drmod5)

Nonlinear mixed-effects model fit by maximum likelihood
  Model: cheact ~ tcmfn4(dose2, tmpstds, lA = lA, tz = tz, lD = lD, lg = lg,      lTr = lTr)
 Data: idta
       AIC      BIC    logLik
  13091.94 13361.48 -6490.971

Random effects:
 Formula: lD ~ 1 | mrid
               lD Residual
StdDev: 0.4901045 14.48713

Combination of variance functions:
 Structure: Different standard deviations per stratum
 Formula: ~1 | mrid
 Parameter estimates:
43845202 43845203 44122601 44393701  Padilla
1.000000 1.417729 1.600728 1.364813 1.526556
 Structure: Power of variance covariate
 Formula: ~fitted(.)
 Parameter estimates:
    power
0.3206554
Fixed effects: list(lA ~ mridXtmonstdyXsexXtmpstds - 1, lD ~ 1, tz ~ sex, lg ~      sex, lTr ~ fdose - 1
                                                          Value Std.Error
lA.mridXtmonstdyXsexXtmpstds44122601:-7:M:1            6.127797 0.0355982
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1            6.247906 0.0670657
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1            6.119946 0.0679701
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1            6.422231 0.0561982
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1            6.329676 0.0310361
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1            7.084879 0.0383147
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1            7.122295 0.0373246
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1            7.239864 0.0349344
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1             6.917658 0.0287474
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1            7.099093 0.0353436
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1            7.057679 0.0362919
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1             6.791085 0.0431167
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1            6.792973 0.0430636
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1             6.608229 0.0731783
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8             6.641643 0.0626597
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24            6.485724 0.0586025
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48            6.539761 0.0513721
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1             6.908280 0.0678916
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8             6.939149 0.0585942
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24            6.901340 0.0486029
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48            6.921544 0.0401087
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5           6.543447 0.0632072
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1             6.486292 0.0645783
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2             6.520605 0.0619411
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4             6.507931 0.0607036
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 6.560617 0.0569678
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                6.600006 0.0514904
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               6.827152 0.0557721
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 6.800017 0.0555736
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 6.908338 0.0506411
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 6.895798 0.0491709
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 6.926067 0.0469912
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                6.910744 0.0434358
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  6.678649 0.0652030
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                6.987279 0.1235567
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  7.060676 0.1159427
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  7.209475 0.1027425
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  7.016804 0.1069565
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  6.891269 0.1105360
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 7.089140 0.0889430
lD                                                         1.721954 0.3089804
tz.(Intercept)                                            -0.419535 0.2260565
tz.sexM                                                    0.314428 0.3501436
lg.(Intercept)                                             0.232853 0.1644021
lg.sexM                                                   -0.201422 0.1325194
lTr.fdose[0,10]                                            1.893164 0.6508066
lTr.fdose(10,50]                                           2.170652 0.2562695
lTr.fdose(50,125]                                          2.429546 0.1925183
                                                           DF   t-value p-value
lA.mridXtmonstdyXsexXtmpstds44122601:-7:M:1               941 172.13760  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1               941  93.16099  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1               941  90.03878  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1               941 114.27828  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1               941 203.94572  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1               941 184.91285  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1               941 190.82051  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1               941 207.24148  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                941 240.63556  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1               941 200.85921  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1               941 194.46975  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                941 157.50486  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1               941 157.74262  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                941  90.30308  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                941 105.99552  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               941 110.67318  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               941 127.30183  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                941 101.75460  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                941 118.42716  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               941 141.99439  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               941 172.56966  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              941 103.52383  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                941 100.44080  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                941 105.27103  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                941 107.20832  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                941 115.16371  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               941 128.17934  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              941 122.41155  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                941 122.36057  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                941 136.41770  0.0000
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                941 140.24142  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                941 147.39075  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               941 159.10252  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 941 102.42859  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               941  56.55120  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 941  60.89798  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 941  70.17031  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 941  65.60427  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 941  62.34410  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                941  79.70427  0.0000
lD                                                        941   5.57302  0.0000
tz.(Intercept)                                            941  -1.85589  0.0638
tz.sexM                                                   941   0.89800  0.3694
lg.(Intercept)                                            941   1.41636  0.1570
lg.sexM                                                   941  -1.51994  0.1289
lTr.fdose[0,10]                                           941   2.90895  0.0037
lTr.fdose(10,50]                                          941   8.47019  0.0000
lTr.fdose(50,125]                                         941  12.61982  0.0000
 Correlation:
                                                          lA.XXX44122601:-7:M
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.000
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD                                                         0.000
tz.(Intercept)                                             0.000
tz.sexM                                                    0.000
lg.(Intercept)                                             0.000
lg.sexM                                                    0.000
lTr.fdose[0,10]                                            0.000
lTr.fdose(10,50]                                           0.000
lTr.fdose(50,125]                                          0.000
                                                          lA.XXX44122601:28:M
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1                0.068
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1                0.082
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1                0.067
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.070
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.075
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.009
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.007
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.007
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.006
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.006
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.036
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.017
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.047
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.044
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.042
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.036
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.002
lD                                                        -0.058
```

```
tz.(Intercept)                                          -0.057
tz.sexM                                                  0.044
lg.(Intercept)                                          -0.124
lg.sexM                                                  0.178
lTr.fdose[0,10]                                         -0.005
lTr.fdose(10,50]                                         0.003
lTr.fdose(50,125]                                       -0.009
                                                        lA.XXX44122601:56:M
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1              0.073
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1              0.000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1              0.063
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1              0.065
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1              0.069
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1               0.009
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1              0.007
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1              0.007
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1               0.006
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1              0.006
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1               0.034
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8               0.015
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24              0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48              0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1               0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8               0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24             -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48             -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5             0.042
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1               0.040
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2               0.037
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4               0.032
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8               0.023
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24              0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5             0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1               0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2              -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4              -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8              -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24             -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5              0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24               0.002
lD                                                      -0.061
tz.(Intercept)                                          -0.057
tz.sexM                                                  0.036
lg.(Intercept)                                          -0.122
lg.sexM                                                  0.153
lTr.fdose[0,10]                                         -0.007
lTr.fdose(10,50]                                         0.003
```

```
lTr.fdose(50,125]                                          -0.010
                                                           lA.XXX44122601:91:M
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1                 0.076
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                 0.079
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                 0.084
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                  0.011
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                 0.009
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                 0.009
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                  0.007
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                 0.007
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                  0.041
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                  0.018
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                 0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                  0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                  0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5                0.051
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                  0.048
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                  0.045
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                  0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                  0.028
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                  0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                 0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                   0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                   0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                   0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                   0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                  0.003
lD                                                         -0.074
tz.(Intercept)                                             -0.069
tz.sexM                                                     0.044
lg.(Intercept)                                             -0.148
lg.sexM                                                     0.184
lTr.fdose[0,10]                                            -0.009
lTr.fdose(10,50]                                            0.004
lTr.fdose(50,125]                                          -0.012
                                                           lA.XXX44122601:-7:F
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
```

```
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD                                                         0.000
tz.(Intercept)                                             0.000
tz.sexM                                                    0.000
lg.(Intercept)                                             0.000
lg.sexM                                                    0.000
lTr.fdose[0,10]                                            0.000
lTr.fdose(10,50]                                           0.000
lTr.fdose(50,125]                                          0.000
                                                          lA.XXX44122601:28:F
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.150
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.160
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.014
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.012
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.011
```

```
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.010
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.016
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.034
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.007
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.033
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.029
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.032
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD                                                        -0.129
tz.(Intercept)                                            -0.065
tz.sexM                                                    0.000
lg.(Intercept)                                            -0.147
lg.sexM                                                   -0.007
lTr.fdose[0,10]                                           -0.024
lTr.fdose(10,50]                                          -0.004
lTr.fdose(50,125]                                         -0.011
                                                          lA.XXX44122601:56:F
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.171
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.014
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.011
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.011
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.009
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.009
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.015
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
```

```
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.036
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.007
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.033
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.029
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.032
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD                                                        -0.126
tz.(Intercept)                                            -0.065
tz.sexM                                                    0.000
lg.(Intercept)                                            -0.136
lg.sexM                                                   -0.017
lTr.fdose[0,10]                                           -0.025
lTr.fdose(10,50]                                          -0.004
lTr.fdose(50,125]                                         -0.012
                                                          lA.XXX44122601:91:F
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1                 0.015
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.012
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.012
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.010
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.016
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.038
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.008
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.010
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.036
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.033
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.023
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.034
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD                                                        -0.135
tz.(Intercept)                                            -0.069
tz.sexM                                                    0.000
lg.(Intercept)                                            -0.146
lg.sexM                                                   -0.018
lTr.fdose[0,10]                                           -0.026
lTr.fdose(10,50]                                          -0.004
lTr.fdose(50,125]                                         -0.013
                                                          lA.XXX44393701:6
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1                0.074
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.072
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.061
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.061
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.016
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.023
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.004
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.016
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.014
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.018
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD                                                        -0.086
tz.(Intercept)                                            -0.048
tz.sexM                                                    0.013
lg.(Intercept)                                            -0.078
lg.sexM                                                    0.023
lTr.fdose[0,10]                                           -0.017
lTr.fdose(10,50]                                          -0.004
lTr.fdose(50,125]                                         -0.014
                                                          lA.XXX44393701:15
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1                0.059
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.050
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.050
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.013
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.019
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.004
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD                                                        -0.070
tz.(Intercept)                                            -0.039
tz.sexM                                                    0.010
lg.(Intercept)                                            -0.063
lg.sexM                                                    0.018
lTr.fdose[0,10]                                           -0.014
lTr.fdose(10,50]                                          -0.003
lTr.fdose(50,125]                                         -0.011
                                                          lA.XXX44393701:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1                 0.048
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.048
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.012
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.018
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD                                                        -0.068
```

```
tz.(Intercept)                                          -0.038
tz.sexM                                                  0.010
lg.(Intercept)                                          -0.062
lg.sexM                                                  0.018
lTr.fdose[0,10]                                         -0.014
lTr.fdose(10,50]                                        -0.003
lTr.fdose(50,125]                                       -0.011
                                                        lA.XXX44393701:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1              0.041
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1               0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8               0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24             -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48             -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1               0.015
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8               0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24             -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48             -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5             0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1               0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2               0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4               0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8               0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24             -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5             0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1               0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2               0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4               0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8               0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24             -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5              0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24               0.000
lD                                                      -0.057
tz.(Intercept)                                          -0.032
tz.sexM                                                  0.009
lg.(Intercept)                                          -0.052
lg.sexM                                                  0.015
lTr.fdose[0,10]                                         -0.012
lTr.fdose(10,50]                                        -0.002
```

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lTr.fdose(50,125]                                          -0.009
                                                           lA.XXX44393701:10
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                  0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                  0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                  0.015
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                  0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                -0.003
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5                0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                  0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                  0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                  0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                  0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5                0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                  0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                  0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                  0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                  0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                 0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                   0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                   0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                   0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                   0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                  0.000
lD                                                         -0.057
tz.(Intercept)                                             -0.032
tz.sexM                                                     0.009
lg.(Intercept)                                             -0.052
lg.sexM                                                     0.015
lTr.fdose[0,10]                                            -0.012
lTr.fdose(10,50]                                           -0.002
lTr.fdose(50,125]                                          -0.009
                                                           lA.XXX43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
```

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lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.110
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.007
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.235
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.042
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.038
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.062
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.054
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.045
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.044
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.033
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.021
lD                                                        -0.143
tz.(Intercept)                                            -0.145
tz.sexM                                                   -0.204
lg.(Intercept)                                            -0.168
lg.sexM                                                    0.019
lTr.fdose[0,10]                                           -0.106
lTr.fdose(10,50]                                          -0.083
lTr.fdose(50,125]                                         -0.108
                                                          lA.XXX43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
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lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.163
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.050
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.046
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.268
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.215
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.071
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.028
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.061
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.100
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.092
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.049
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.032
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.052
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.113
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.119
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.020
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.056
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.076
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.088
lD                                                         0.025
tz.(Intercept)                                            -0.007
tz.sexM                                                   -0.161
lg.(Intercept)                                            -0.022
lg.sexM                                                   -0.019
lTr.fdose[0,10]                                            0.349
lTr.fdose(10,50]                                           0.313
lTr.fdose(50,125]                                          0.224
                                                          lA.XXX43845203:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.045
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lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.034
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.193
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.183
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.066
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.039
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.079
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.084
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.048
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.032
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.045
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.105
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.116
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.024
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.022
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.047
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.067
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.079
lD                                                         0.056
tz.(Intercept)                                             0.057
tz.sexM                                                   -0.068
lg.(Intercept)                                             0.032
lg.sexM                                                   -0.024
lTr.fdose[0,10]                                            0.269
lTr.fdose(10,50]                                           0.284
lTr.fdose(50,125]                                          0.253
                                                          lA.XXX43845203:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.017
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.061
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.063
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.007
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lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.044
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.023
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.027
lD                                                         0.019
tz.(Intercept)                                             0.033
tz.sexM                                                   -0.018
lg.(Intercept)                                             0.016
lg.sexM                                                   -0.010
lTr.fdose[0,10]                                            0.077
lTr.fdose(10,50]                                           0.098
lTr.fdose(50,125]                                          0.110
                                                          lA.XXX43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.091
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.040
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.023
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.016
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.037
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.043
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.078
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.068
```

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lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.054
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.048
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.056
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.026
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.034
lD                                                        -0.221
tz.(Intercept)                                            -0.346
tz.sexM                                                    0.109
lg.(Intercept)                                            -0.234
lg.sexM                                                    0.021
lTr.fdose[0,10]                                           -0.154
lTr.fdose(10,50]                                          -0.125
lTr.fdose(50,125]                                         -0.136
                                                          lA.XXX43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.291
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.095
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.055
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.110
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.112
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.035
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.028
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.093
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.168
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.163
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.030
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.066
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.093
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.110
lD                                                         0.022
tz.(Intercept)                                            -0.117
tz.sexM                                                    0.059
lg.(Intercept)                                            -0.043
lg.sexM                                                    0.017
lTr.fdose[0,10]                                            0.476
lTr.fdose(10,50]                                           0.393
lTr.fdose(50,125]                                          0.297
                                                          lA.XXX43845203:1:F:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.097
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.046
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.028
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.050
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.110
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.119
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.061
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.074
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.159
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.171
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.034
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.033
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.069
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.098
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.117
lD                                                         0.077
```

```
tz.(Intercept)                                          0.033
tz.sexM                                                 0.016
lg.(Intercept)                                          0.032
lg.sexM                                                 0.004
lTr.fdose[0,10]                                         0.399
lTr.fdose(10,50]                                        0.417
lTr.fdose(50,125]                                       0.361
                                                       lA.XXX43845203:1:F:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.019
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.040
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.046
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.058
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.067
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.025
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.035
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.042
lD                                                         0.028
tz.(Intercept)                                             0.035
tz.sexM                                                    0.003
lg.(Intercept)                                             0.018
lg.sexM                                                   -0.001
lTr.fdose[0,10]                                            0.119
lTr.fdose(10,50]                                           0.150
```

```
lTr.fdose(50,125]                                          0.163
                                                          lA.XXX43845202:1:M:0
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.116
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.105
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.081
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.048
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.104
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.095
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.087
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.059
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.021
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.021
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.021
lD                                                        -0.100
tz.(Intercept)                                            -0.097
tz.sexM                                                    0.022
lg.(Intercept)                                            -0.163
lg.sexM                                                    0.170
lTr.fdose[0,10]                                           -0.053
lTr.fdose(10,50]                                          -0.081
lTr.fdose(50,125]                                         -0.088
                                                          lA.XXX43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
```

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lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.098
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.079
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.051
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.093
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.086
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.080
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.059
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.029
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.013
lD                                                        -0.086
tz.(Intercept)                                            -0.084
tz.sexM                                                    0.019
lg.(Intercept)                                            -0.147
lg.sexM                                                    0.159
lTr.fdose[0,10]                                           -0.026
lTr.fdose(10,50]                                          -0.051
lTr.fdose(50,125]                                         -0.061
                                                          lA.mXXX43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
```

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lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.080
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.061
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.080
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.076
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.075
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.063
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.044
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.001
lD                                                        -0.069
tz.(Intercept)                                            -0.067
tz.sexM                                                    0.015
lg.(Intercept)                                            -0.129
lg.sexM                                                    0.151
lTr.fdose[0,10]                                            0.018
lTr.fdose(10,50]                                          -0.003
lTr.fdose(50,125]                                         -0.018
                                                          lA.XXX43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
```

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lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.072
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.054
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.055
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.062
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.065
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.065
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.039
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.023
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.022
lD                                                        -0.037
tz.(Intercept)                                            -0.035
tz.sexM                                                    0.009
lg.(Intercept)                                            -0.092
lg.sexM                                                    0.128
lTr.fdose[0,10]                                            0.086
lTr.fdose(10,50]                                           0.074
lTr.fdose(50,125]                                          0.056
                                                          lA.XXX43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.063
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.019
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.043
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.066
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.091
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.078
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.034
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.044
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.049
lD                                                         0.004
tz.(Intercept)                                             0.011
tz.sexM                                                    0.000
lg.(Intercept)                                            -0.043
lg.sexM                                                    0.094
lTr.fdose[0,10]                                            0.163
lTr.fdose(10,50]                                           0.171
lTr.fdose(50,125]                                          0.154
                                                          lA.XXX43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.011
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.040
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.079
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.085
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.033
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.045
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.052
lD                                                         0.035
tz.(Intercept)                                             0.058
tz.sexM                                                   -0.008
lg.(Intercept)                                             0.018
lg.sexM                                                    0.025
lTr.fdose[0,10]                                            0.150
lTr.fdose(10,50]                                           0.186
lTr.fdose(50,125]                                          0.205
                                                          lA.XXX43845202:1:F:0
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.166
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.154
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.112
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.051
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.023
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.044
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.007
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.022
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.029
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.034
lD                                                        -0.154
tz.(Intercept)                                            -0.144
tz.sexM                                                    0.042
lg.(Intercept)                                            -0.157
lg.sexM                                                   -0.025
lTr.fdose[0,10]                                           -0.084
lTr.fdose(10,50]                                          -0.119
lTr.fdose(50,125]                                         -0.120
                                                          lA.XXX43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.147
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.112
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.061
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.039
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.020
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.023
lD                                                        -0.138
```

```
tz.(Intercept)                                          -0.130
tz.sexM                                                  0.040
lg.(Intercept)                                          -0.143
lg.sexM                                                 -0.026
lTr.fdose[0,10]                                         -0.050
lTr.fdose(10,50]                                        -0.080
lTr.fdose(50,125]                                       -0.086
                                                        lA.mXXX43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                0.122
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                0.085
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.032
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5              -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24               -0.004
lD                                                       -0.119
tz.(Intercept)                                          -0.113
tz.sexM                                                  0.038
lg.(Intercept)                                          -0.128
lg.sexM                                                 -0.029
lTr.fdose[0,10]                                          0.009
lTr.fdose(10,50]                                        -0.013
```

```
lTr.fdose(50,125]                                          -0.027
                                                           lA.XXX43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                  0.115
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                 0.063
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                -0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                   0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                   0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                   0.023
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                  0.029
lD                                                         -0.072
tz.(Intercept)                                             -0.066
tz.sexM                                                     0.030
lg.(Intercept)                                             -0.084
lg.sexM                                                    -0.030
lTr.fdose[0,10]                                             0.106
lTr.fdose(10,50]                                            0.105
lTr.fdose(50,125]                                           0.083
                                                           lA.XXX43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
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lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.118
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.021
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.040
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.057
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.069
lD                                                        -0.010
tz.(Intercept)                                             0.002
tz.sexM                                                    0.018
lg.(Intercept)                                            -0.025
lg.sexM                                                   -0.030
lTr.fdose[0,10]                                            0.214
lTr.fdose(10,50]                                           0.248
lTr.fdose(50,125]                                          0.226
                                                          lA.XXX43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
```

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lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.021
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.022
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.012
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.045
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.063
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.075
lD                                                         0.043
tz.(Intercept)                                             0.075
tz.sexM                                                    0.001
lg.(Intercept)                                             0.036
lg.sexM                                                   -0.019
lTr.fdose[0,10]                                            0.201
lTr.fdose(10,50]                                           0.270
lTr.fdose(50,125]                                          0.297
                                                          lA.XXXP:1:M:0.6
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
```

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lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.276
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.275
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.272
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.203
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.153
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.022
lD                                                        -0.200
tz.(Intercept)                                            -0.079
tz.sexM                                                   -0.002
lg.(Intercept)                                            -0.139
lg.sexM                                                   -0.013
lTr.fdose[0,10]                                           -0.069
lTr.fdose(10,50]                                          -0.068
lTr.fdose(50,125]                                         -0.046
                                                          lA.XXXP:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
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lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.255
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.251
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.185
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.138
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.016
lD                                                        -0.084
tz.(Intercept)                                            -0.007
tz.sexM                                                    0.020
lg.(Intercept)                                             0.000
lg.sexM                                                    0.045
lTr.fdose[0,10]                                           -0.039
lTr.fdose(10,50]                                          -0.078
lTr.fdose(50,125]                                         -0.030
                                                          lA.XXXP:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
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lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.255
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.193
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.149
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.028
lD                                                        -0.080
tz.(Intercept)                                            -0.004
tz.sexM                                                    0.019
lg.(Intercept)                                            -0.001
lg.sexM                                                    0.045
lTr.fdose[0,10]                                           -0.021
lTr.fdose(10,50]                                          -0.037
lTr.fdose(50,125]                                         -0.015
                                                          lA.mXXXP:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.210
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.171
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.051
lD                                                        -0.072
tz.(Intercept)                                             0.001
tz.sexM                                                    0.016
lg.(Intercept)                                            -0.002
lg.sexM                                                    0.046
lTr.fdose[0,10]                                            0.016
lTr.fdose(10,50]                                           0.047
lTr.fdose(50,125]                                          0.018
                                                          lA.XXXP:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.163
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.077
lD                                                        -0.042
```

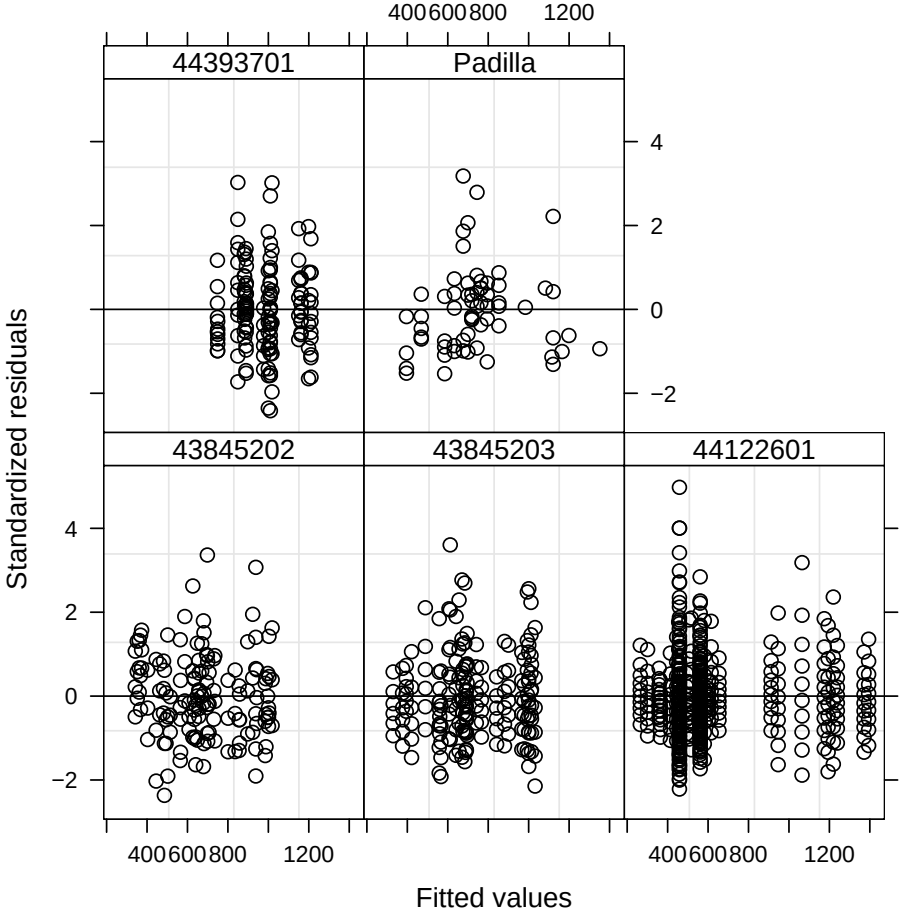
```
tz.(Intercept)                                          0.010
tz.sexM                                                 0.009
lg.(Intercept)                                         -0.003
lg.sexM                                                 0.035
lTr.fdose[0,10]                                         0.071
lTr.fdose(10,50]                                        0.167
lTr.fdose(50,125]                                       0.065
                                                       lA.XXXP:1:M:6
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24              0.089
lD                                                     -0.022
tz.(Intercept)                                          0.015
tz.sexM                                                 0.004
lg.(Intercept)                                         -0.003
lg.sexM                                                 0.028
lTr.fdose[0,10]                                         0.102
lTr.fdose(10,50]                                        0.236
```

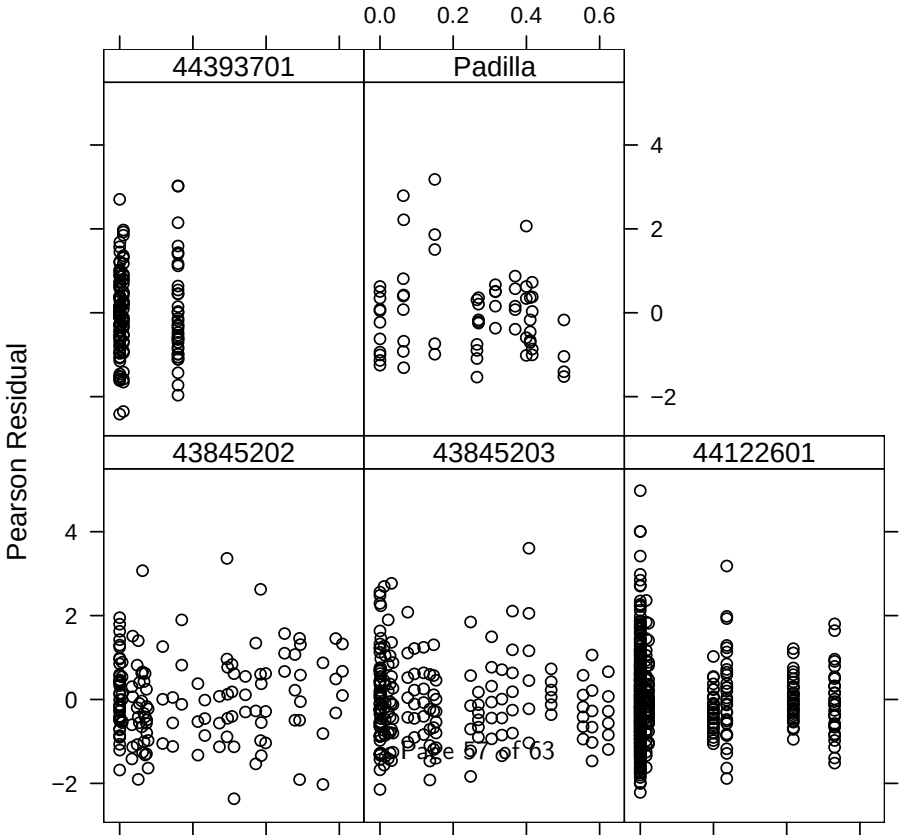
```
lTr.fdose(50,125]                                          0.091
                                                         lA.XXXP:1:M:24 lD
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24
lD                                                         0.018
tz.(Intercept)                                             0.019          0.311
tz.sexM                                                   -0.006         -0.052
lg.(Intercept)                                            -0.003          0.574
lg.sexM                                                    0.006         -0.077
lTr.fdose[0,10]                                            0.124          0.245
lTr.fdose(10,50]                                           0.280          0.107
lTr.fdose(50,125]                                          0.109          0.123
                                                         tz.(I) tz.sxM lg.(I)
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
```

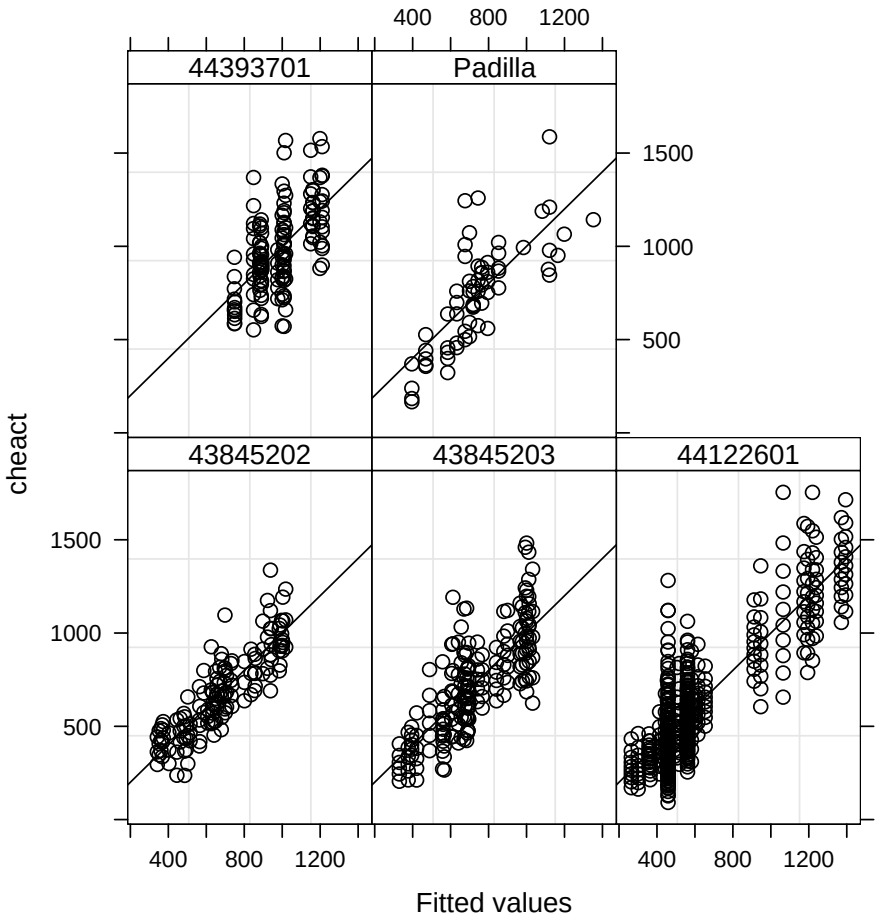
```
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24
lD
tz.(Intercept)
tz.sexM                                                  -0.456
lg.(Intercept)                                            0.682 -0.228
lg.sexM                                                  -0.393  0.664 -0.419
lTr.fdose[0,10]                                           0.052 -0.018  0.177
lTr.fdose(10,50]                                          0.068 -0.031 -0.011
lTr.fdose(50,125]                                         0.379 -0.017  0.189
                                                         lg.sxM lT.[0, lT.(10
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:-7:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:6:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:15:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:20:F:1
```

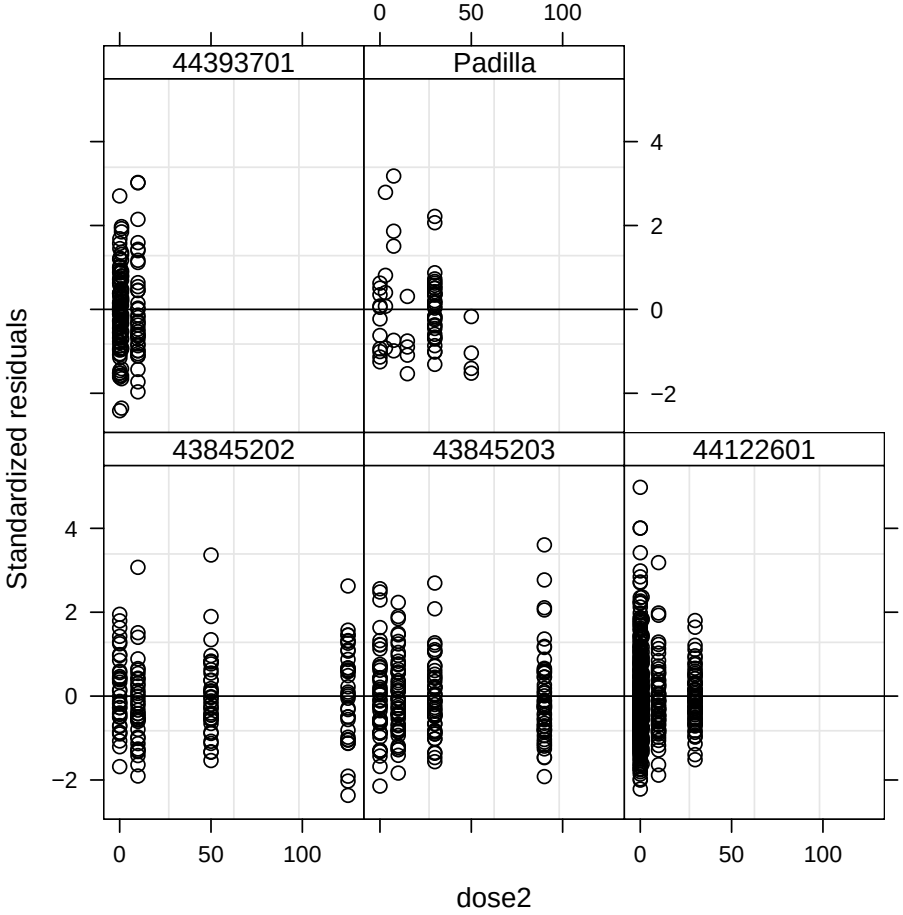
```
lA.mridXtmonstdyXsexXtmpstds44393701:4:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24
lD
tz.(Intercept)
tz.sexM
lg.(Intercept)
lg.sexM
lTr.fdose[0,10]                                          -0.009
lTr.fdose(10,50]                                         -0.001  0.445
lTr.fdose(50,125]                                        -0.048  0.314  0.388

Standardized Within-Group Residuals:
       Min         Q1        Med         Q3        Max
-2.4159780 -0.6775764 -0.1089738  0.5496201  4.9782934

Number of Observations: 993
Number of Groups: 5
```

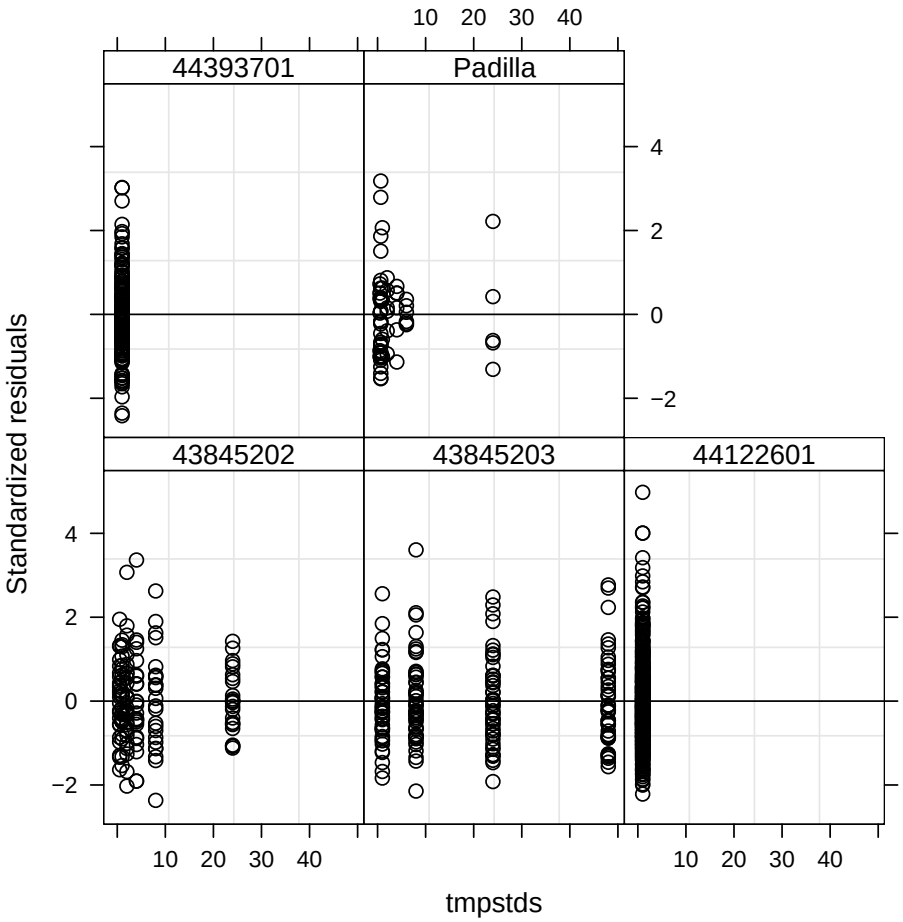
Diagnostic plots for this model:


44393701
Padilla
43845202
43845203
44122601
Standardized residuals
Fitted values
400 600 800 1200
4
2
0
−2


44393701
Padilla
43845202
43845203
44122601
Pearson Residual
0.0 0.2 0.4 0.6
4
2
0
−2

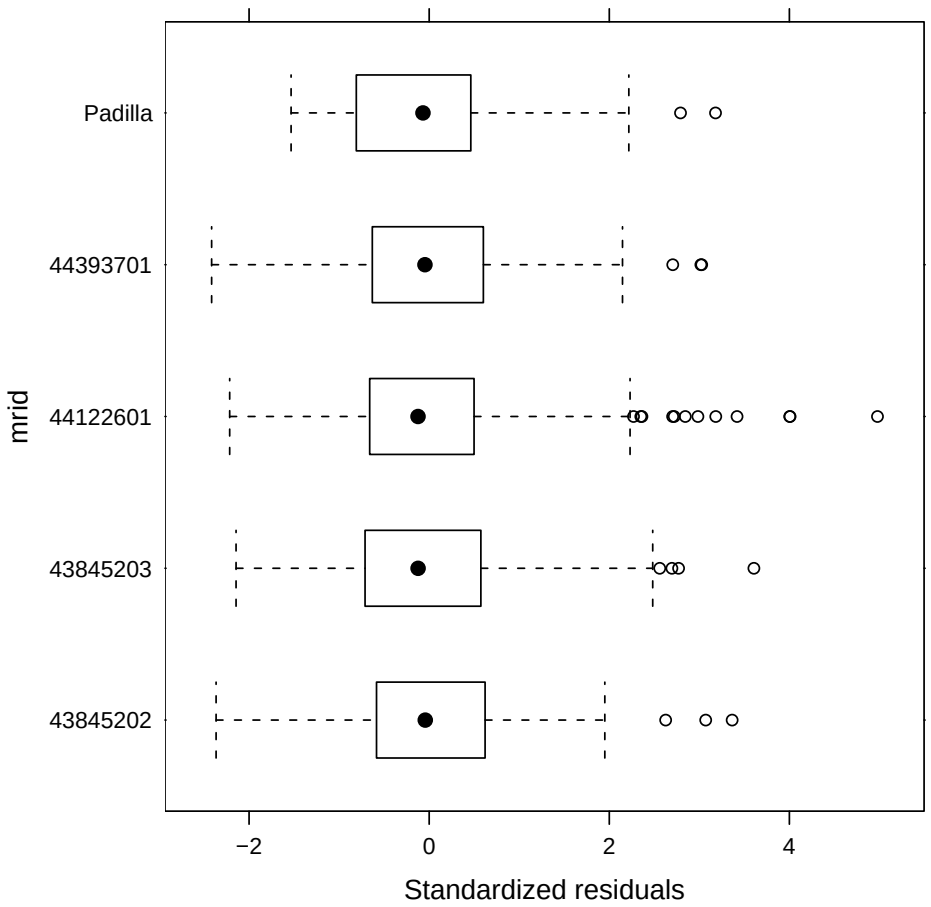

44393701
Padilla
43845202
43845203
44122601
cheact
Fitted values
400
800
1200
500
1000
1500


44393701
Padilla
43845202
43845203
44122601
Standardized residuals
dose2
0
50
100
4
2
0
−2

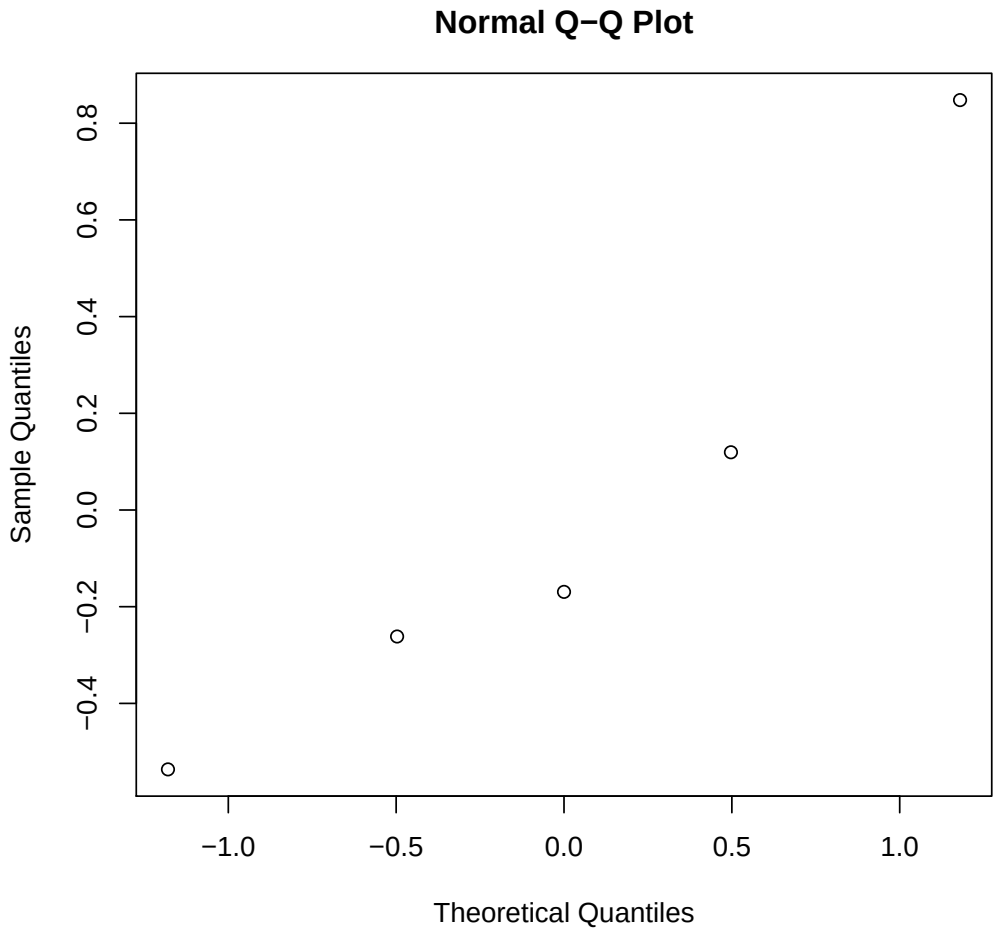


Some more graphs:

Pearson residuals split by mrid and sex, and QQ plots for the Pearson residuals and random effects:



There is no point in plotting the distribution of the error residuals here, since the original data were aggregated for all but the Padilla study. The "individual" data used in the modeling functions were constructed (using a lognormal distribution) to give the observed mean and standard deviation.



3 Summary

The critical estimates from this analysis are listed below. They are printed with greater than usual precision, in case they are to be used in further computation. For reporting, round to two or three significant digits. BMD has units mg/kg, and times are in hours.

species RAT

mrid `[1] "43845202" "43845203" "44122601" "44393701" "Padilla"`

`lD` **(se)** 1.72195433930606 (0.308980377873796)

BMD (95% CI) 5.59545319960223 (3.09696002841308, 10.1096224109105)

BMDL, the one-sided lower 95% CL 3.4064607618057

`lTr dose: [0, 10] (standard error)` 1.89316384097296 (0.650806570732949)

`lTr dose: (10, 50] (standard error)` 2.17065206017634 (0.256269479925593)

`lTr dose: (50, 125] (standard error)` 2.42954623829548 (0.192518318243561)

Recovery Half-life dose: [0, 10 (95% CI)] 6.64034447543307 (1.91021319754333, 23.0833787606130)

Recovery Half-life dose: (10, 50 (95% CI)] 8.76399683131612 (5.36572817383186, 14.3144859320124)

Recovery Half-life dose: (50, 125 (95% CI)] 11.3537290235256 (7.85363036979044, 16.4137038121247)

Save the results:

```
> save.image(file = "RatRBCDR.RData")
```

Save the results for incorporating into a database:

```
> carbaryl.oral.rbc <- list(mrid = levels(dta$mrid), species = "RAT",
+     BMDS = list(combined = list(lD = tTab["lD", "Value"], lD.se = tTab["lD",
+         "Std.Error"], BMD = exp(Ints["lD", "est."]), BMD.CI = exp(Ints["lD",
+         c("lower", "upper")]), BMDL = exp(Ints90["lD", "lower"]))),
+     HalfLives = list("[0,10]" = list(lTr = tTab["lTr.fdose[0,10]",
+         "Value"], lTr.se = tTab["lTr.fdose[0,10]", "Std.Error"],
+         Tr = exp(Ints["lTr.fdose[0,10]", "est."]), Tr.CI = c(exp(Ints["lTr.fdose[0,10]",
+             "lower"]), exp(Ints["lTr.fdose[0,10]", "upper"]))),
+         "(10,50]" = list(lTr = tTab["lTr.fdose(10,50]", "Value"],
+             lTr.se = tTab["lTr.fdose(10,50]", "Std.Error"], Tr = exp(Ints["lTr.fdose(10,50]",
+                 2]), Tr.CI = c(exp(Ints["lTr.fdose(10,50]", 1]),
+                 exp(Ints["lTr.fdose(10,50]", 3]))), "(50, 120]" = list(lTr = tTab["lTr.fdose(50,125]",
+             "Value"], lTr.se = tTab["lTr.fdose(50,125]", "Std.Error"],
+             Tr = exp(Ints["lTr.fdose(50,125]", 2]), Tr.CI = c(exp(Ints["lTr.fdose(50,125]",
+                 1]), exp(Ints["lTr.fdose(50,125]", 3]))))))
> save(carbaryl.oral.rbc, file = file.path("..", "..", "01Summaries",
+     "carbaryl.oral.rbc.RData"))
```