Dose-Time Response Modeling of Rat Brain 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.

```
> 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 brain. via gavage dosing. It includes acute, subchronic, and chronic 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 = Brain.R) added to the Padilla dataset. To keep the response scale similar across studies, Padilla's values for cheact need to be divided by 1000. Finally the two datasets are combined.

These are all the names used for the brain sections we want from `AggData`:

```
> BrainSections <- levels(AggData$sctn)[grep("(^BRAIN)|(^WHOLEBRAIN)|(LEFT HEMISPHERE)| (HALFBRAIN)",
+     levels(AggData$sctn))]
```

Now, set up the analysis dataset.

```
> dta <- CleanUp(subset(AggData, chemical %in% "CARBARYL" & species %in%
+     "RAT" & dsmtd %in% "GAVAGE" & sctn %in% BrainSections & !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",
+     "brain.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/400
> dta <- rbind(dta, Pdta[, names(dta)])
```

Summary of the relevant variables in this dataset:

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

dta$mrid: 43845202
     cheact            sd                n          dose           tmonstdy
 Min.   :1.000   Min.   :0.0500   Min.   :3   Min.   :  0.00   Min.   :1
 1st Qu.:1.600   1st Qu.:0.1800   1st Qu.:3   1st Qu.:  7.50   1st Qu.:1
 Median :4.850   Median :0.3050   Median :3   Median : 30.00   Median :1
 Mean   :4.169   Mean   :0.4419   Mean   :3   Mean   : 46.25   Mean   :1
 3rd Qu.:6.125   3rd Qu.:0.4700   3rd Qu.:3   3rd Qu.: 68.75   3rd Qu.:1
 Max.   :6.700   Max.   :2.2400   Max.   :3   Max.   :125.00   Max.   :1
    tmpstds       sex          mrid
 Min.   : 0.500   F:24   43845202:48
 1st Qu.: 1.000   M:24   44393701: 0
 Median : 3.000          Padilla : 0
 Mean   : 6.583
 3rd Qu.: 8.000
 Max.   :24.000
------------------------------------------------------------
dta$mrid: 44393701
     cheact            sd             n          dose           tmonstdy
 Min.   :3.400   Min.   :0.04   Min.   :6   Min.   : 0.000   Min.   :10
 1st Qu.:5.200   1st Qu.:0.13   1st Qu.:6   1st Qu.: 0.075   1st Qu.:10
 Median :5.850   Median :0.19   Median :6   Median : 0.550   Median :10
 Mean   :5.325   Mean   :0.25   Mean   :6   Mean   : 2.775   Mean   :10
 3rd Qu.:5.975   3rd Qu.:0.31   3rd Qu.:6   3rd Qu.: 3.250   3rd Qu.:10
 Max.   :6.200   Max.   :0.58   Max.   :6   Max.   :10.000   Max.   :10
    tmpstds  sex         mrid
 Min.   :1   F:4   43845202:0
 1st Qu.:1   M:0   44393701:4
 Median :1         Padilla :0
 Mean   :1
 3rd Qu.:1
 Max.   :1
------------------------------------------------------------
dta$mrid: Padilla
     cheact             sd          n          dose         tmonstdy
 Min.   : 5.326   Min.   :0   Min.   :1   Min.   : 0.0   Min.   :1
 1st Qu.: 9.908   1st Qu.:0   1st Qu.:1   1st Qu.: 7.5   1st Qu.:1
 Median :14.025   Median :0   Median :1   Median :30.0   Median :1
 Mean   :12.957   Mean   :0   Mean   :1   Mean   :21.5   Mean   :1
 3rd Qu.:15.710   3rd Qu.:0   3rd Qu.:1   3rd Qu.:30.0   3rd Qu.:1
 Max.   :18.710   Max.   :0   Max.   :1   Max.   :50.0   Max.   :1
    tmpstds        sex          mrid
 Min.   : 0.5000   F: 0   43845202: 0
 1st Qu.: 0.6667   M:65   44393701: 0
 Median : 0.6667          Padilla :65
 Mean   : 3.4000
 3rd Qu.: 4.0000
 Max.   :24.0000
```

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

         mrid tmonstdy    tmpstds
388  44393701       10  1.0000000
472  43845202        1  0.5000000
476  43845202        1  1.0000000
480  43845202        1  2.0000000
484  43845202        1  4.0000000
488  43845202        1  8.0000000
492  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
```

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.

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 = ":"))
```

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 50 125
  43845202  6  0   0  0  0   6  0  0  6  6
  44393701  1  1   1  0  0   1  0  0  0  0
  Padilla   0  0   0  0  0   0  0  0  0  0

, , sex = M
```

```
          dose
mrid       0  0.1 1  3  7.5 10 15 30 50 125
  43845202  6  0   0  0  0   6  0  0  6  6
  44393701  0  0   0  0  0   0  0  0  0  0
  Padilla  11  0   0  5  5   0  5 34  5  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: 44393701
     tmpstds
dose  1
  0   1
  0.1 1
  1   1
  10  1
------------------------------------------------------------
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   5                 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 among 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$tmpstds > 0])
> initfile <- paste("initvals-brain-DR-1.RData", sep = "")
> if (!file.exists(initfile)) {
+     lA.start <- lm(I(log(cheact)) ~ mridXtmonstdyXsexXtmpstds -
+         1, data = CleanUp(subset(dta, dose %in% 0)))
+     Start <- c(coef(lA.start), rep(log(3), nlevels(dta$mridXtmonstdy)),
+         0, c(-2, 0), c(log(1), 0), rep(log(1.5), nlevels(dta$fdose) *
+             2))
+     init1 <- GetInitialValues(cbind(resp = cheact, sd = sd, n = n) ~
+         tcmfn4(dose, tmpstds, lA = lA, tz = tz, lD = lD, lg = lg,
+             lTr = lTr), data = dta, params = list(lA ~ mridXtmonstdyXsexXtmpstds -
+         1, lD ~ mridXtmonstdy + sex - 1, tz ~ sex, lg ~ sex,
+         lTr ~ fdose:sex - 1), start = Start, weights = varComb(varIdent(form = ~1 |
+         mrid), varPower(value = 1)))
+     save(init1, file = initfile)
+ } else load(initfile)
> tmp <- t(init1$Redundancy[[1]]$Eigens)
> tmp <- tmp[-grep("^lA", rownames(tmp)), ]
> round(tmp[, 1:5], digits = 2)
```

```
                            [,1]  [,2] [,3] [,4] [,5]
CondIndex                  14.09 10.20 6.14 5.01 4.18
mu                          0.14  0.20 0.33 0.41 0.49
lD.mridXtmonstdy44122601:28 0.68  0.00 0.01 0.00 0.00
lD.mridXtmonstdy44122601:56 0.64  0.00 0.03 0.02 0.01
lD.mridXtmonstdy44122601:91 0.66  0.00 0.02 0.01 0.00
lD.mridXtmonstdy44393701:10 0.64  0.01 0.01 0.01 0.02
lD.mridXtmonstdy43845203:1  0.68  0.00 0.02 0.03 0.00
lD.mridXtmonstdy43845202:1  0.53  0.02 0.01 0.04 0.00
lD.mridXtmonstdyPadilla:1   0.54  0.38 0.01 0.00 0.03
lD.sexM                     0.00  0.96 0.01 0.00 0.00
tz.(Intercept)              0.09  0.13 0.63 0.01 0.06
tz.sexM                     0.00  0.18 0.66 0.01 0.00
lg.(Intercept)              0.91  0.06 0.00 0.01 0.00
lTr.fdose[0,10]:sexF        0.08  0.06 0.01 0.53 0.08
lTr.fdose(10,50]:sexF       0.00  0.02 0.07 0.48 0.01
lTr.fdose(50,125]:sexF      0.04  0.01 0.21 0.19 0.00
lTr.fdose[0,10]:sexM        0.01  0.45 0.12 0.12 0.04
lTr.fdose(10,50]:sexM       0.01  0.05 0.14 0.08 0.49
lTr.fdose(50,125]:sexM      0.01  0.00 0.06 0.01 0.20
```

The above shows the results of a redundancy analysis, assuming `lg.sexM` is dropped from the model. With that extra parameter, the largest condition index is over 30, with strong loadings of all the `lD` and `lg` levels. Try

fitting the full model first, but if it fails, try refitting with a single value of `lg`. Initially use gnls, get an adequate variance model, and test whether the different kills within 44122601 differ among themselves.

```
> Start <- init1$start$beta
> idta <- init1$data
> drmod1g <- gnls(cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz,
+     lD = lD, lg = lg, lTr = lTr), data = idta, params = list(lA ~
+     mridXtmonstdyXsexXtmpstds - 1, lD ~ mridXtmonstdy + sex -
+     1, tz ~ sex, lg ~ sex, lTr ~ fdose:sex - 1), start = Start)
> drmod1gb <- update(drmod1g, weights = varIdent(form = ~1 | mrid))

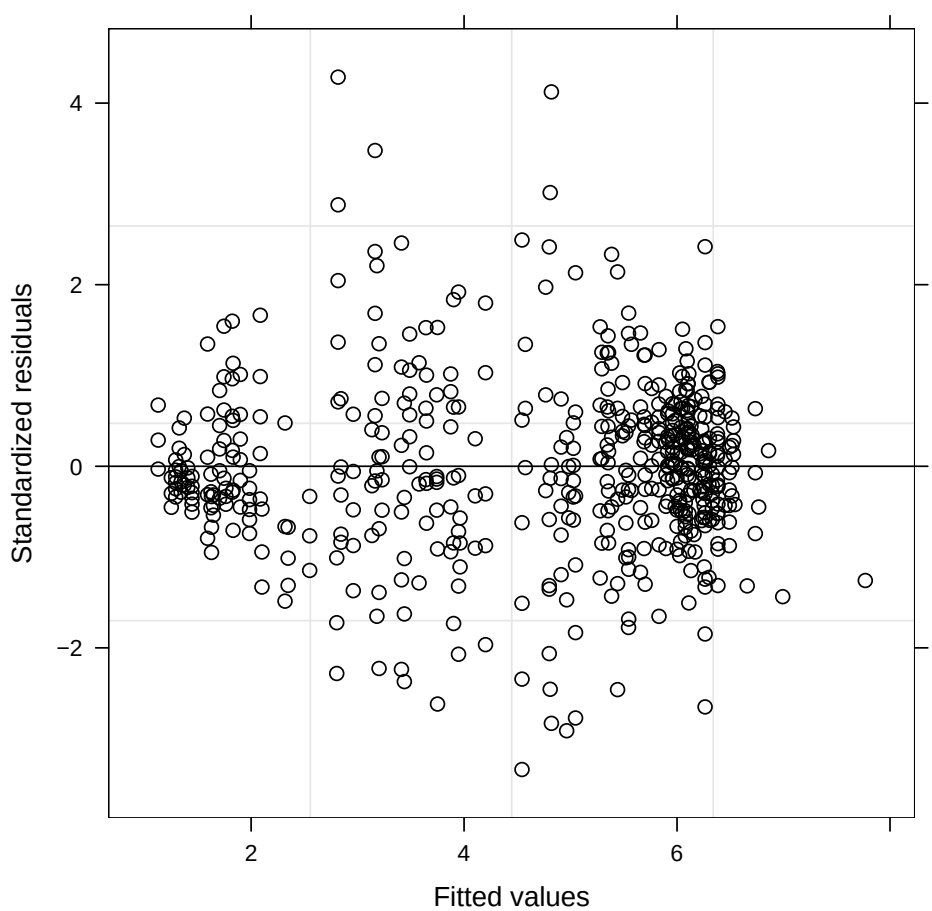
> drmod1gc <- update(drmod1gb, weights = varComb(varIdent(form = ~1 |
+     mrid), varPower()))
```

Compare the two:

```
> anova(drmod1gb, drmod1gc)

         Model df      AIC      BIC    logLik   Test  L.Ratio p-value
drmod1gb     1 57 1100.261 1345.406 -493.1306
drmod1gc     2 58 1097.637 1347.083 -490.8187 1 vs 2 4.623776  0.0315
```

Adding the `varPower()` component to the weights improves the fit. Here are a couple of plots of residuals, the first versus fitted value, and the second by fraction of inhibition:



```
> local({
+     Pars <- nlme:::getParsGnls(drmod1gc$plist, drmod1gc$pmap,
+         coef(drmod1gc), length(drmod1gc$residuals))
+     BG <- exp(Pars[, "lA"])
+     Inh <- 1 - fitted(drmod1gc)/BG
+     plot(resid(drmod1gc, type = "p") ~ Inh, xlab = "Fractional Inhibition",
+         ylab = "Pearson Residual")
+     abline(h = 0)
+ })
```

Here are the interesting part of the coefficients from drmod1gc:

```
> nms <- rownames(summary(drmod1gc)$tTable)
> summary(drmod1gc)$tTable[-grep("^lA", nms), ]

                                  Value Std.Error    t-value      p-value
lD.mridXtmonstdy44122601:28  1.05013930 0.2407095  4.3626838 1.565595e-05
lD.mridXtmonstdy44122601:56  0.59073784 0.2542254  2.3236776 2.054850e-02
lD.mridXtmonstdy44122601:91  0.81110437 0.2449340  3.3115224 9.959821e-04
lD.mridXtmonstdy44393701:10  0.51814245 0.2360990  2.1945978 2.865817e-02
lD.mridXtmonstdy43845203:1   0.81999483 0.2570839  3.1895998 1.515390e-03
lD.mridXtmonstdy43845202:1   0.99727256 0.2354070  4.2363758 2.711420e-05
lD.mridXtmonstdyPadilla:1    2.39960046 0.2914369  8.2336865 1.639671e-15
lD.sexM                     -0.76756456 0.3744678 -2.0497480 4.091753e-02
tz.(Intercept)              -1.34099055 0.2229005 -6.0160949 3.486384e-09
tz.sexM                      0.13990246 0.2743649  0.5099138 6.103401e-01
lg.(Intercept)               0.09241507 0.1184941  0.7799127 4.358165e-01
lg.sexM                     -0.10399193 0.1739605 -0.5977905 5.502542e-01
lTr.fdose[0,10]:sexF         1.10293948 0.3255836  3.3875765 7.615519e-04
lTr.fdose(10,50]:sexF        1.56033650 0.1379083 11.3143044 1.521475e-26
lTr.fdose(50,125]:sexF       2.42237382 0.1204227 20.1155917 3.755603e-66
lTr.fdose[0,10]:sexM         0.41313850 0.2909033  1.4201918 1.561839e-01
lTr.fdose(10,50]:sexM        1.26279680 0.1306321  9.6668154 2.333088e-20
lTr.fdose(50,125]:sexM       2.60392312 0.1177453 22.1148791 8.505248e-76
```

Test whether the three kills in 44122601 have significantly different values for lD. If so, in the random effects model, use

```
random=lD ~ 1 | mridXtmonstdy
```

```
> grep("^lD", names(coef(drmod1gc)))

[1] 35 36 37 38 39 40 41 42

> L <- matrix(0, nrow = 2, ncol = length(coef(drmod1gc)))
> colnames(L) <- names(coef(drmod1gc))
> L[1, c(35, 36, 37)] <- c(2, -1, -1)/3
> L[2, c(35, 36, 37)] <- c(-1, 2, -1)/3
> anova(drmod1gc, L = L)

Denom. DF: 493
 F-test for linear combination(s)
  lD.mridXtmonstdy44122601:28 lD.mridXtmonstdy44122601:56
1                   0.6666667                  -0.3333333
2                  -0.3333333                   0.6666667
  lD.mridXtmonstdy44122601:91
```

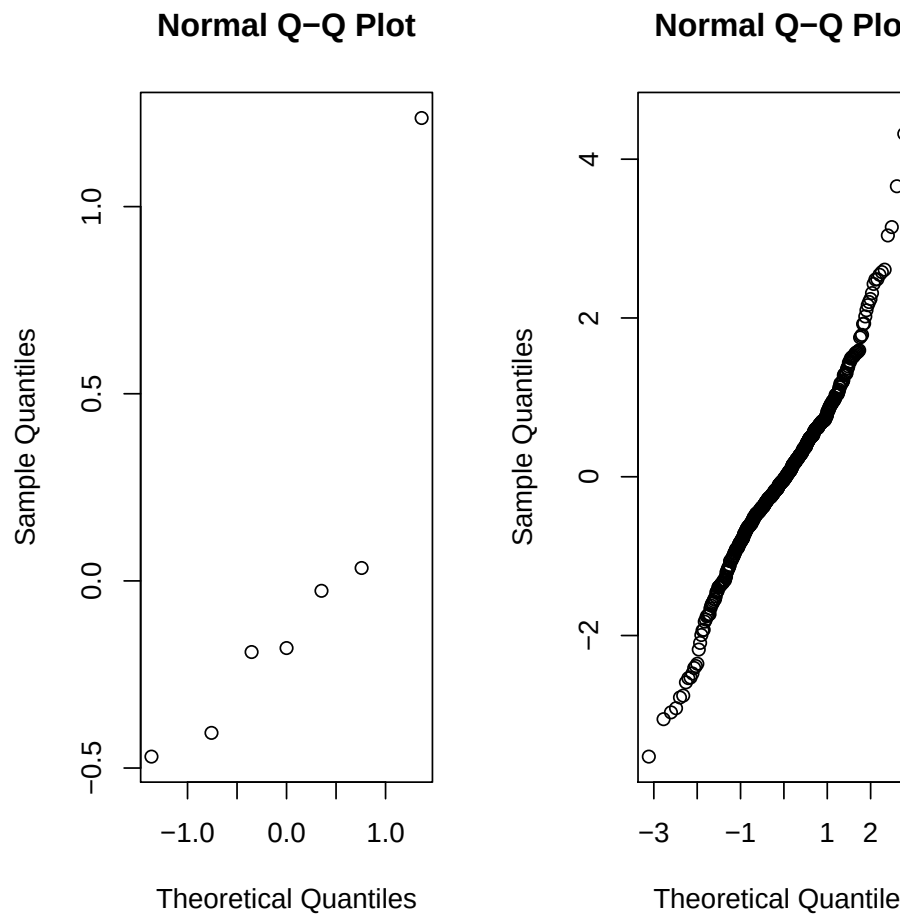
```
1                  -0.3333333
2                  -0.3333333
  numDF  F-value p-value
1     2 3.861479  0.0217
```

These three values are significantly different.

We will check whether the two shape parameters, `tz` and `lg` differ by sex, and whether the "low-dose" shape parameter differs from zero, in the mixed effects model? Individually, they clearly do not appear to in this model, using the P-values in the table, above (P-value for `tz.sexM` is 0.61, for `lg.(Intercept)` is 0.44, and for `lg.sexM` is 0.55).

Next, fit a random effects model for `lD`. Note that ID in the random effects model is just a function of sex, so need to re-do the starting values:

```
> Par <- coef(drmod1gc)
> Start <- list(fixed = c(getParms("^lA", Par), c(mean(getParms("^lD\\.mrid",
+     Par)), Par["lD.sexM"]), getParms("^tz", Par), getParms("^lg",
+     Par), getParms("^lTr", Par)))
> formals(tcmfn4)$lg <- 0
> drmod1d <- nlme(cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz,
+     lD = lD, lg = lg, lTr = lTr), data = idta, fixed = list(lA ~
+     mridXtmonstdyXsexXtmpstds - 1, lD ~ sex - 1, tz ~ sex, lg ~
+     sex, lTr ~ fdose:sex - 1), random = lD ~ 1 | mridXtmonstdy,
+     weights = varComb(varIdent(form = ~1 | mrid), varPower()),
+     start = Start)
```



Plots of random effects and residual distributions:
The curious thing here is the skewed random effects distribution. This is due to the large value of `lD` from the Padilla study. Refit the model, adding a factor to the model for `lD` that identifies that study.

```
> Par <- fixed.effects(drmod1d)
> Start <- list(fixed = c(getParms("^lA", Par), c(getParms("^lD",
+     Par), 0), getParms("tz", Par), getParms("lg", Par), getParms("^lTr",
+     Par)))
> idta$Padilla <- with(idta, ifelse(mrid == "Padilla", 1, 0))
> drmod1e <- nlme(cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz,
+     lD = lD, lg = lg, lTr = lTr), data = idta, fixed = list(lA ~
+     mridXtmonstdyXsexXtmpstds - 1, lD ~ sex + Padilla - 1, tz ~
+     sex, lg ~ sex, lTr ~ fdose:sex - 1), random = lD ~ 1 | mridXtmonstdy,
+     weights = varComb(varIdent(form = ~1 | mrid), varPower()),
+     start = Start)
> nms <- rownames(summary(drmod1e)$tTable)
> summary(drmod1e)$tTable[-grep("^lA", nms), ]
```

```
                            Value Std.Error  DF    t-value      p-value
lD.sexF                 0.7757889 0.2377701 492  3.2627687 1.179973e-03
lD.sexM                 0.0664182 0.3220807 492  0.2062160 8.367075e-01
lD.Padilla              1.5738003 0.2440620 492  6.4483614 2.704565e-10
tz.(Intercept)         -1.3138966 0.2150206 492 -6.1105623 2.020719e-09
tz.sexM                 0.1061611 0.2707960 492  0.3920335 6.952032e-01
```

```
lg.(Intercept)          0.1007383 0.1274672 492  0.7903083 4.297285e-01
lg.sexM                -0.1097621 0.1838077 492 -0.5971576 5.506769e-01
lTr.fdose[0,10]:sexF    1.0737999 0.3031562 492  3.5420683 4.347967e-04
lTr.fdose(10,50]:sexF   1.5420520 0.1329082 492 11.6023873 1.116063e-27
lTr.fdose(50,125]:sexF  2.4345652 0.1194725 492 20.3776139 2.224979e-67
lTr.fdose[0,10]:sexM    0.4102427 0.2866334 492  1.4312452 1.529948e-01
lTr.fdose(10,50]:sexM   1.2656173 0.1293312 492  9.7858609 8.810157e-21
lTr.fdose(50,125]:sexM  2.6033427 0.1172286 492 22.2073952 3.349348e-76
```

The `lD` from the Padilla study is substantially greater than the average of the other male studies.

Now, we can test whether there is a gender difference in the shape parameters, and whether `lg` differs from 0:

```
> L <- diag(4)
> dimnames(L) = list(NULL, c("lD.sexM", "tz.sexM", "lg.(Intercept)",
+     "lg.sexM"))
> anova(drmod1e, L = L)

F-test for linear combination(s)
  lD.sexM tz.sexM lg.(Intercept) 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   492 0.4225942  0.7924
```

None of these factors differs from 0.

Are there differences between the sexes in recovery half-life?

```
> indx <- grep("^lTr", names(fixed.effects(drmod1e)))
> L <- cbind(diag(3), -diag(3))
> colnames(L) <- names(fixed.effects(drmod1e))[indx]
> anova(drmod1e, 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   492 1.821223  0.1423
```

No! Reestimate the model with just `fdose` in the model for `lTr`.

```
> Par <- fixed.effects(drmod1e)
> Start <- list(fixed = c(getParms("^lA", Par), getParms("^lD",
+     Par), Par["tz.(Intercept)"], getParms("^lTr.*:sexF", Par)))
> drmod1f <- nlme(cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz,
+     lD = lD, lTr = lTr), data = idta, fixed = list(lA ~ mridXtmonstdyXsexXtmpstds -
+     1, lD ~ sex + Padilla - 1, tz ~ 1, lTr ~ fdose - 1), random = lD ~
+     1 | mridXtmonstdy, weights = varComb(varIdent(form = ~1 |
```

```
+     mrid), varPower()), start = Start)
> nms <- rownames(summary(drmod1f)$tTable)
> summary(drmod1f)$tTable[-grep("^lA", nms), ]

                       Value  Std.Error  DF    t-value       p-value
lD.sexF            0.4679444 0.10560411 498   4.431120  1.153712e-05
lD.sexM            0.1899025 0.12468803 498   1.523021  1.283882e-01
lD.Padilla         1.5077764 0.21020755 498   7.172798  2.676242e-12
tz                -1.2557656 0.12155773 498 -10.330610  8.484047e-23
lTr.fdose[0,10]    0.6027873 0.21027854 498   2.866614  4.324573e-03
lTr.fdose(10,50]   1.4063511 0.09200992 498  15.284776  1.590417e-43
lTr.fdose(50,125]  2.5218924 0.08177954 498  30.837693 1.415516e-117
```

Are the sexes different in this model?

```
> grep("^lD", names(fixed.effects(drmod1f)))

[1] 35 36 37

> L <- matrix(0, nrow = 1, ncol = length(fixed.effects(drmod1f)))
> L[1, 35:36] <- c(1, -1)
> anova(drmod1f, L = L)

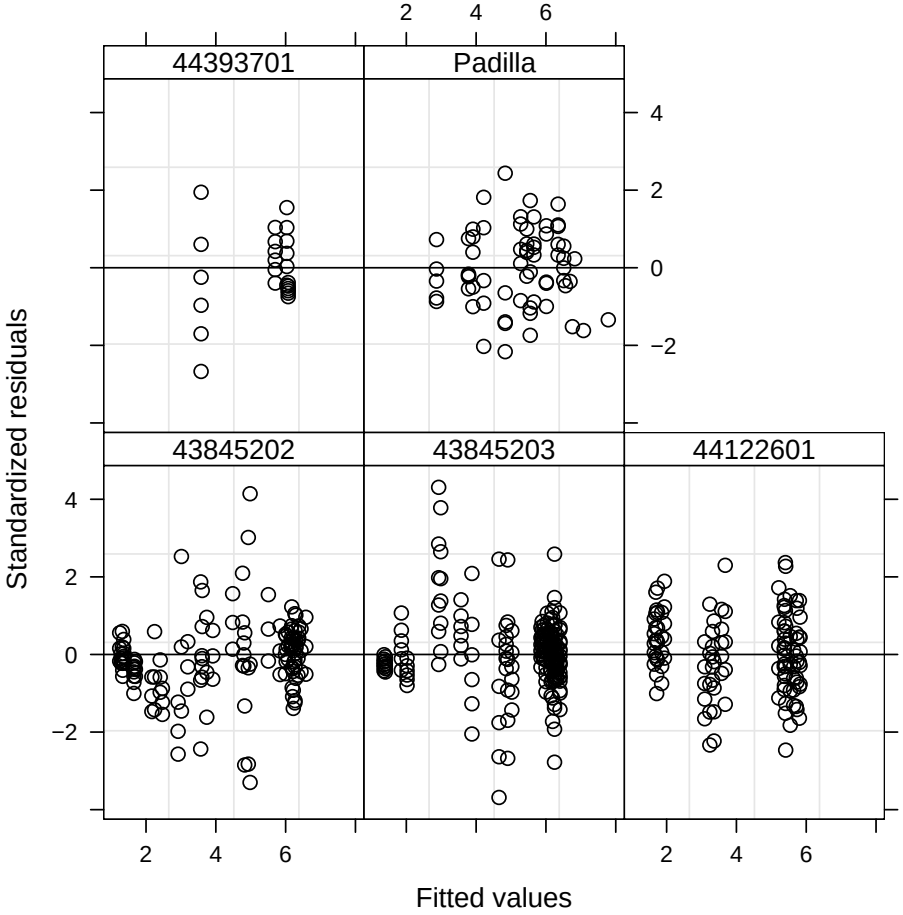
F-test for linear combination(s)
lD.sexF lD.sexM
      1      -1
  numDF denDF F-value p-value
1     1   498 6.47552  0.0112

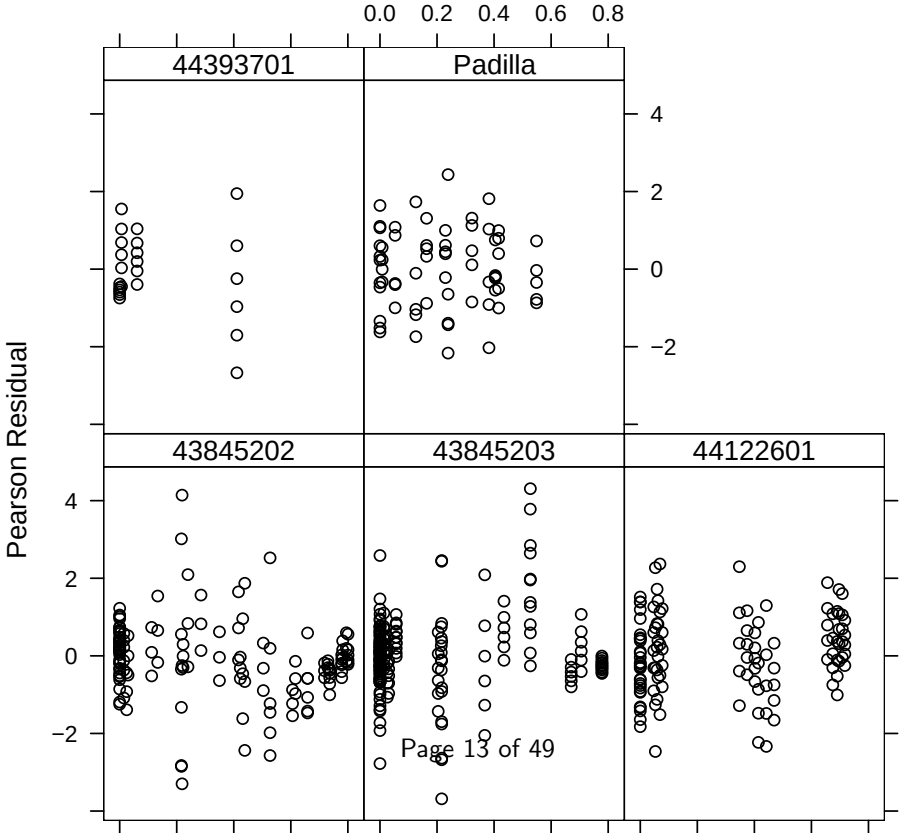
> L[, 37] <- -1
> anova(drmod1f, L = L)

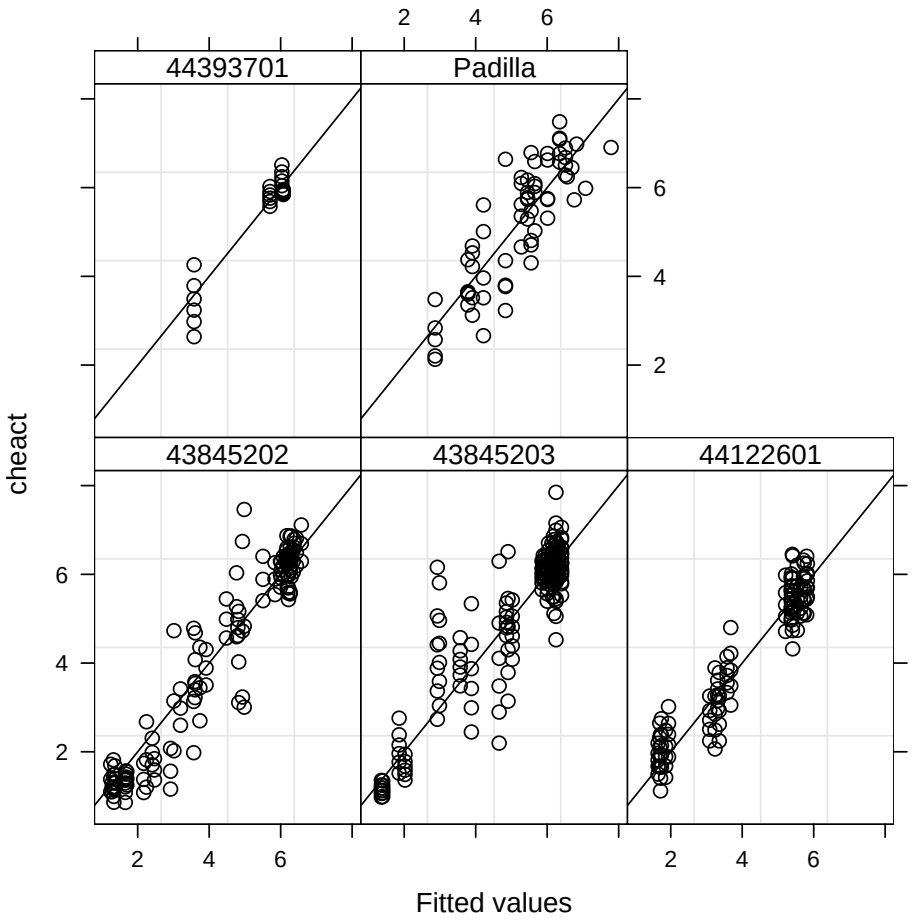
F-test for linear combination(s)
   lD.sexF    lD.sexM lD.Padilla
         1         -1         -1
  numDF denDF  F-value p-value
1     1   498 37.87114  <.0001
```

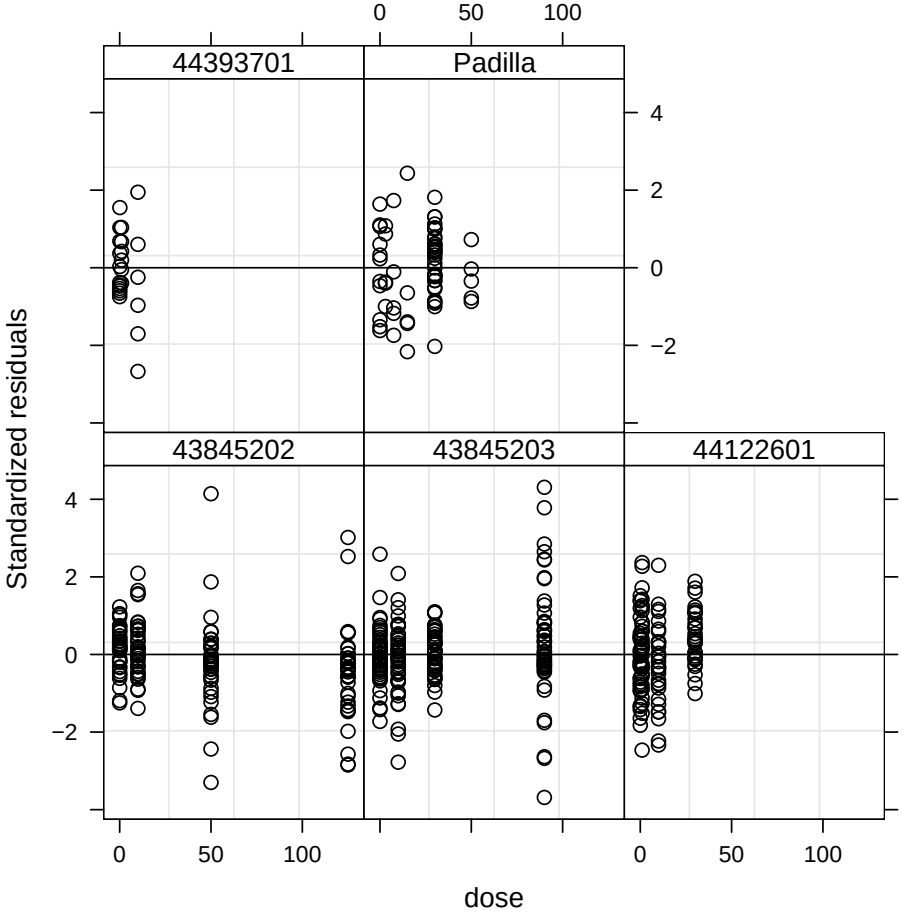
Yes, whether we consider only the submitted studies (first test, P = 0.0112), or include Padilla's data (P < 0.0001). Among the registrant-submitted studies, males are more sensitive than females, but Padilla's `lD`, which comes from a study of all males, is about 4.52 greater than that from the females of the registrant submitted studies. Since the Padilla study had no females, we cannot tell whether the relationship between males and females seen in the registrant data would hold up when Padilla's data is included. As a result, we report female BMD, male BMD (combined), and male BMD (registrant only), male BMD (Padilla only).

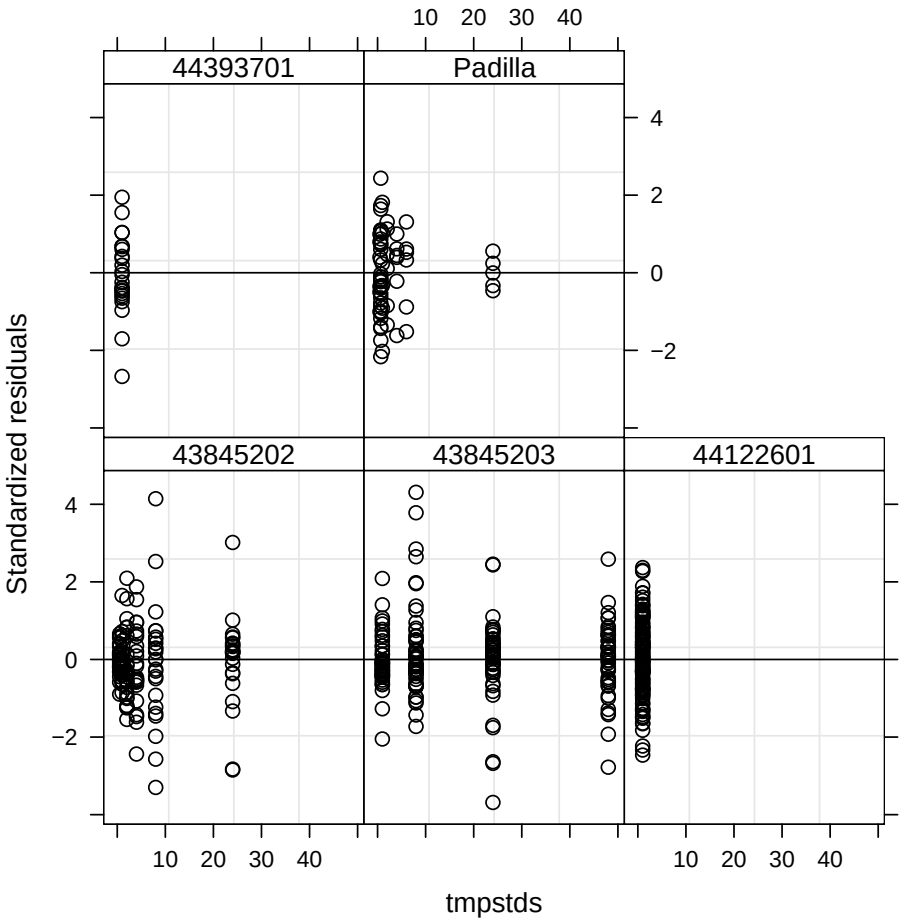
First, though, diagnostic graphics for the model contained in `drmod1f`.


44393701
Padilla
43845202
43845203
44122601
Standardized residuals
Fitted values


44393701
Padilla
43845202
43845203
44122601
Pearson Residual

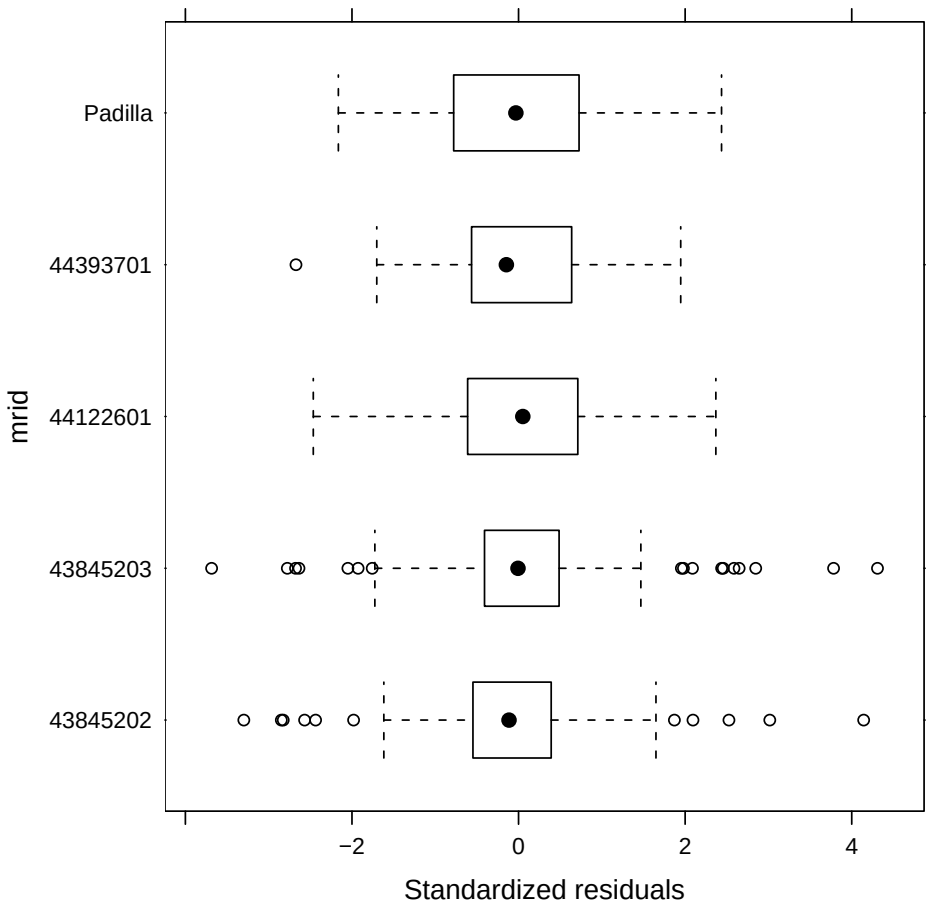

44393701
Padilla
43845202
43845203
44122601
cheact
Fitted values
2
4
6


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

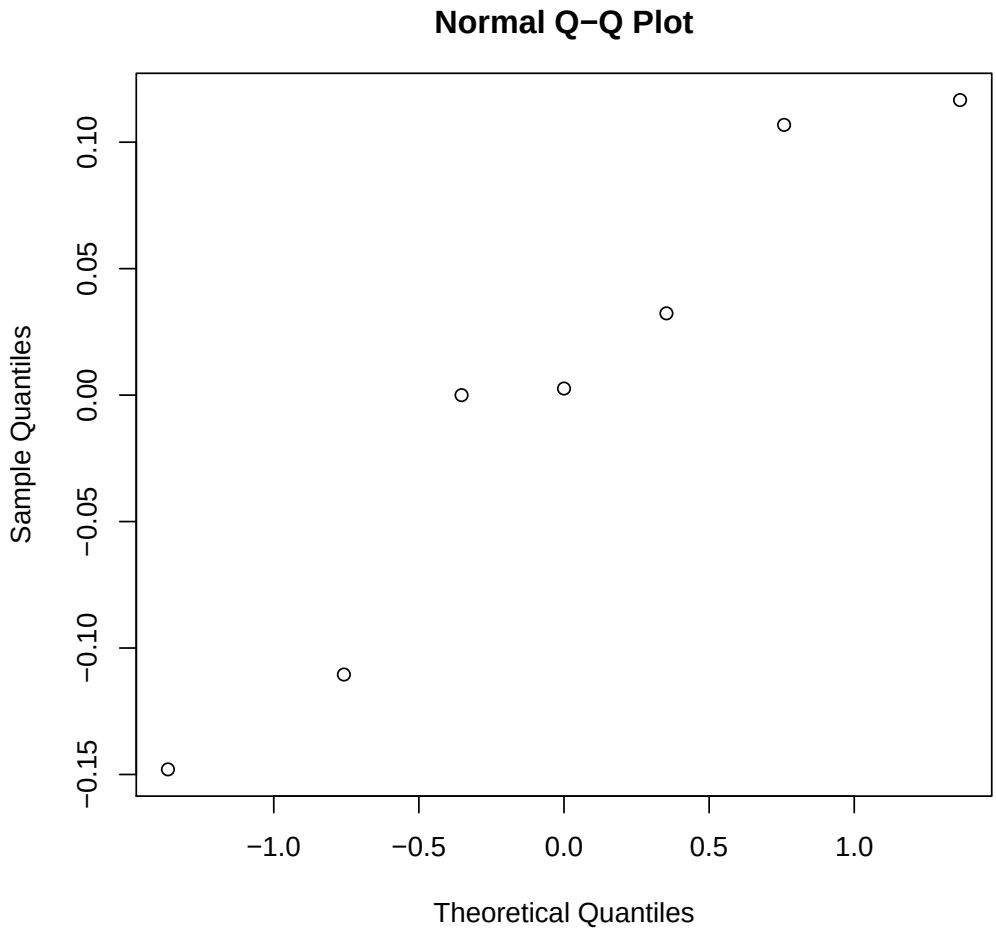


Some more graphs:

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.



Details of this final model fit:

```
> tTab <- summary(drmod1f)$tTable
> Ints <- intervals(drmod1f, which = "fixed")$fixed
> Ints90 <- intervals(drmod1f, which = "fixed", level = 0.9)$fixed
> summary(drmod1f)
```

```
Nonlinear mixed-effects model fit by maximum likelihood
  Model: cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz, lD = lD, lTr = lTr)
 Data: idta
       AIC      BIC    logLik
  1099.587 1306.024 -501.7933

Random effects:
 Formula: lD ~ 1 | mridXtmonstdy
        lD.(Intercept)  Residual
StdDev:      0.1201726 0.6768378

Combination of variance functions:
 Structure: Different standard deviations per stratum
 Formula: ~1 | mrid
 Parameter estimates:
44122601 44393701 43845203 43845202  Padilla
```

```
1.000000 0.714789 1.452317 1.325200 1.627597
 Structure: Power of variance covariate
 Formula: ~fitted(.)
 Parameter estimates:
     power
-0.2516564
Fixed effects: list(lA ~ mridXtmonstdyXsexXtmpstds - 1, lD ~ sex + Padilla -      1, tz ~ 1, lTr ~ fdose
                                                          Value  Std.Error
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1             1.7462604 0.02582508
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1             1.7617696 0.02584665
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1             1.7584071 0.02570019
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1             1.7294918 0.02555417
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1             1.7122550 0.02659375
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1             1.7429488 0.02542031
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1             1.8038810 0.01313624
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1              1.8421744 0.03801175
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8              1.8229805 0.02833520
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24             1.7819138 0.02440703
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48             1.8319829 0.02161836
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1              1.8135134 0.03842158
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8              1.8423620 0.02721686
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24             1.8339739 0.02291296
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48             1.8565213 0.02097515
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5            1.8625464 0.04889846
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1              1.8224858 0.04883912
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2              1.8355778 0.04516209
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4              1.8489849 0.04087970
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8              1.8205630 0.03576792
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24             1.8392811 0.02915496
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5            1.8308852 0.04941180
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1              1.7942855 0.04913858
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2              1.8349794 0.04396207
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4              1.8837273 0.03822383
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8              1.8524399 0.03411063
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24             1.8181767 0.02991043
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  1.8482582 0.03168317
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5             1.9006700 0.07720272
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1               1.9204602 0.07199684
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2               2.0524134 0.05759179
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4               1.9564879 0.05582686
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6               1.9108568 0.05376345
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24              1.8811908 0.04906245
lD.sexF                                                 0.4679444 0.10560411
lD.sexM                                                 0.1899025 0.12468803
lD.Padilla                                              1.5077764 0.21020755
tz                                                     -1.2557656 0.12155773
lTr.fdose[0,10]                                         0.6027873 0.21027854
lTr.fdose(10,50]                                        1.4063511 0.09200992
lTr.fdose(50,125]                                       2.5218924 0.08177954
                                                        DF   t-value p-value
lA.mridXtmonstdyXsexXtmpstds44122601:28:M:1            498  67.61879  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1            498  68.16239  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1            498  68.42000  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1            498  67.67943  0.0000
```

```
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                498  64.38563  0.0000
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                498  68.56520  0.0000
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                498 137.32098  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 498  48.46329  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 498  64.33624  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                498  73.00822  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                498  84.74200  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 498  47.20039  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 498  67.69193  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                498  80.04090  0.0000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                498  88.51053  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               498  38.09008  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 498  37.31611  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 498  40.64422  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 498  45.22991  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 498  50.89933  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                498  63.08638  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               498  37.05360  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 498  36.51480  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 498  41.74006  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 498  49.28148  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 498  54.30682  0.0000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                498  60.78737  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 498  58.33564  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                498  24.61921  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  498  26.67423  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  498  35.63726  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  498  35.04564  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  498  35.54193  0.0000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 498  38.34278  0.0000
lD.sexF                                                    498   4.43112  0.0000
lD.sexM                                                    498   1.52302  0.1284
lD.Padilla                                                 498   7.17280  0.0000
tz                                                         498 -10.33061  0.0000
lTr.fdose[0,10]                                            498   2.86661  0.0043
lTr.fdose(10,50]                                           498  15.28478  0.0000
lTr.fdose(50,125]                                          498  30.83769  0.0000
 Correlation:
                                                           lA.XXX44122601:28:M
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1                 0.051
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1                 0.053
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1                 0.067
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                -0.016
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                -0.017
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                  0.039
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                 0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 -0.013
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 -0.012
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                 0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5                0.030
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.009
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                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.020
lD.sexM                                                   -0.193
lD.Padilla                                                 0.113
tz                                                         0.024
lTr.fdose[0,10]                                           -0.035
lTr.fdose(10,50]                                          -0.005
lTr.fdose(50,125]                                          0.009
                                                          lA.XXX44122601:56:M
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1                0.051
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1               -0.016
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.066
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1               -0.015
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.038
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.011
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                -0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.030
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.016
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.008
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                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.022
lD.sexM                                                   -0.186
lD.Padilla                                                 0.109
tz                                                         0.014
lTr.fdose[0,10]                                           -0.034
lTr.fdose(10,50]                                          -0.005
lTr.fdose(50,125]                                          0.004
                                                          lA.XXX44122601:91:M
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1               -0.017
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1               -0.016
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.066
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.039
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.013
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                -0.011
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.030
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.009
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                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.019
lD.sexM                                                   -0.190
lD.Padilla                                                 0.111
tz                                                         0.020
lTr.fdose[0,10]                                           -0.035
lTr.fdose(10,50]                                          -0.005
lTr.fdose(50,125]                                          0.007
                                                          lA.XXX44122601:28:F
```

```
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1                0.039
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.041
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.029
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                -0.013
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.034
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.001
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                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.164
lD.sexM                                                    0.000
lD.Padilla                                                -0.002
tz                                                         0.025
lTr.fdose[0,10]                                           -0.021
lTr.fdose(10,50]                                          -0.009
lTr.fdose(50,125]                                          0.009
                                                          lA.XXX44122601:56:F
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1                0.039
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.028
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                -0.011
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.009
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.033
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.000
```

```
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                -0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                -0.013
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.001
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                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.157
lD.sexM                                                   -0.003
lD.Padilla                                                 0.000
tz                                                         0.016
lTr.fdose[0,10]                                           -0.020
lTr.fdose(10,50]                                          -0.009
lTr.fdose(50,125]                                          0.006
                                                          lA.XXX44122601:91:F
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1                0.029
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                -0.013
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.034
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.010
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.001
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                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.162
lD.sexM                                                   -0.002
lD.Padilla                                                -0.001
tz                                                         0.022
lTr.fdose[0,10]                                           -0.021
lTr.fdose(10,50]                                          -0.009
lTr.fdose(50,125]                                          0.008
                                                          lA.XXX443
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                -0.009
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.024
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                -0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                -0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.019
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.000
lD.sexF                                                   -0.138
lD.sexM                                                   -0.054
lD.Padilla                                                 0.030
tz                                                         0.034
lTr.fdose[0,10]                                           -0.026
lTr.fdose(10,50]                                          -0.009
```

```
lTr.fdose(50,125]                                          0.013
                                                          lA.XXX43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8                 0.015
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.055
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.010
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5               0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD.sexF                                                    0.003
lD.sexM                                                   -0.122
lD.Padilla                                                 0.074
tz                                                        -0.058
lTr.fdose[0,10]                                            0.002
lTr.fdose(10,50]                                          -0.026
lTr.fdose(50,125]                                         -0.021
                                                          lA.XXX43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24                0.036
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48                0.014
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                 0.005
```

```
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.126
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.037
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.032
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.074
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.131
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.111
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.062
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.120
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.105
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.030
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.009
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.022
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.050
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.061
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.013
lD.sexF                                                    0.176
lD.sexM                                                    0.148
lD.Padilla                                                -0.068
tz                                                        -0.027
lTr.fdose[0,10]                                            0.292
lTr.fdose(10,50]                                           0.286
lTr.fdose(50,125]                                          0.096
                                                          lA.XXX43845203:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.024
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.036
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.039
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.029
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.019
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.029
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.030
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.019
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                    0.009
lD.sexM                                                    0.006
lD.Padilla                                                -0.001
tz                                                         0.055
lTr.fdose[0,10]                                            0.028
lTr.fdose(10,50]                                           0.091
lTr.fdose(50,125]                                          0.182
                                                          lA.XXX43845203:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8                 0.014
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.025
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.020
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.001
lD.sexF                                                   -0.006
lD.sexM                                                   -0.006
lD.Padilla                                                 0.003
tz                                                         0.045
```

```
lTr.fdose[0,10]                                          0.004
lTr.fdose(10,50]                                         0.030
lTr.fdose(50,125]                                        0.129
                                                        lA.XXX43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.019
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24              -0.001
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48              -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5             -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1               -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2               -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4               -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8               -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24              -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                0.022
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8               -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24              -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                -0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                -0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24               -0.001
lD.sexF                                                  -0.128
lD.sexM                                                   0.006
lD.Padilla                                               -0.004
tz                                                       -0.041
lTr.fdose[0,10]                                          -0.004
lTr.fdose(10,50]                                         -0.033
lTr.fdose(50,125]                                        -0.015
                                                        lA.XXX43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:F:1
lA.mridXtmonstdyXsexXtmpstds44393701:10:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:M:24
```

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lA.mridXtmonstdyXsexXtmpstds43845203:1:M:48
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:1
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:8
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:24                0.037
lA.mridXtmonstdyXsexXtmpstds43845203:1:F:48                0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.034
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.061
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.114
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.101
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.031
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.027
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.060
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.111
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.097
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.030
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.021
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.048
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.058
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.012
lD.sexF                                                    0.121
lD.sexM                                                    0.153
lD.Padilla                                                -0.072
tz                                                        -0.012
lTr.fdose[0,10]                                            0.255
lTr.fdose(10,50]                                           0.274
lTr.fdose(50,125]                                          0.101
                                                          lA.XXX43845203:1:F:2
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:0.5              -0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.030
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.033
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.002
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.030
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.032
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.008
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.020
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                    0.006
lD.sexM                                                    0.006
lD.Padilla                                                -0.001
tz                                                         0.060
lTr.fdose[0,10]                                            0.027
lTr.fdose(10,50]                                           0.093
lTr.fdose(50,125]                                          0.194
                                                          lA.XXX43845203:1:F:4
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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              -0.003
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.011
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.000
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.012
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.020
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.001
lD.sexF                                                   -0.006
lD.sexM                                                   -0.006
```

```
lD.Padilla                                                  0.003
tz                                                          0.047
lTr.fdose[0,10]                                             0.004
lTr.fdose(10,50]                                            0.030
lTr.fdose(50,125]                                           0.133
                                                           lA.XXX43845202:1:M:0
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                  0.038
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:2                  0.009
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 -0.023
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 -0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5                0.035
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                  0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 -0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 -0.028
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 -0.024
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                 0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                   0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  -0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 -0.003
lD.sexF                                                    -0.057
lD.sexM                                                    -0.149
lD.Padilla                                                  0.086
tz                                                         -0.026
lTr.fdose[0,10]                                            -0.115
lTr.fdose(10,50]                                           -0.059
lTr.fdose(50,125]                                          -0.022
                                                           lA.XXX43845202:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.036
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:4                 0.023
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.007
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24               -0.002
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5               0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.020
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.015
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.001
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                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD.sexF                                                    0.016
lD.sexM                                                   -0.072
lD.Padilla                                                 0.045
tz                                                        -0.054
lTr.fdose[0,10]                                            0.008
lTr.fdose(10,50]                                          -0.012
lTr.fdose(50,125]                                         -0.020
                                                          lA.mXXX43845202:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.100
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8                 0.062
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.007
```

```
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.021
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.060
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.086
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.056
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                    0.139
lD.sexM                                                    0.066
lD.Padilla                                                -0.029
tz                                                        -0.097
lTr.fdose[0,10]                                            0.217
lTr.fdose(10,50]                                           0.082
lTr.fdose(50,125]                                         -0.011
                                                          lA.XXX43845202:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.108
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24                0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.030
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.084
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.138
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.100
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.034
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.042
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.009
```

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lD.sexF                                                    0.223
lD.sexM                                                    0.185
lD.Padilla                                                -0.091
tz                                                        -0.104
lTr.fdose[0,10]                                            0.363
lTr.fdose(10,50]                                           0.197
lTr.fdose(50,125]                                          0.018
                                                          lA.XXX43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5              -0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.004
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.054
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.100
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.086
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.024
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.018
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.041
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.049
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.010
lD.sexF                                                    0.146
lD.sexM                                                    0.134
lD.Padilla                                                -0.063
tz                                                        -0.030
lTr.fdose[0,10]                                            0.238
lTr.fdose(10,50]                                           0.232
lTr.fdose(50,125]                                          0.073
                                                          lA.XXX43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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              -0.005
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                -0.001
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.006
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.017
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.025
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.026
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.017
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                    0.009
lD.sexM                                                    0.007
lD.Padilla                                                -0.002
tz                                                         0.046
lTr.fdose[0,10]                                            0.025
lTr.fdose(10,50]                                           0.078
lTr.fdose(50,125]                                          0.153
                                                          lA.XXX43845202:1:F:0
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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
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lA.mridXtmonstdyXsexXtmpstds43845202:1:M:8
lA.mridXtmonstdyXsexXtmpstds43845202:1:M:24
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:0.5
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:1                 0.045
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:2                 0.018
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                -0.014
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                -0.019
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5                0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                 -0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.003
lD.sexF                                                   -0.147
lD.sexM                                                   -0.045
lD.Padilla                                                 0.024
tz                                                        -0.019
lTr.fdose[0,10]                                           -0.110
lTr.fdose(10,50]                                          -0.061
lTr.fdose(50,125]                                         -0.018
                                                          lA.XXX43845202:1:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.039
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:4                 0.026
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.008
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24               -0.001
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                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                 -0.003
```

```
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                 -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                -0.001
lD.sexF                                                   -0.070
lD.sexM                                                    0.027
lD.Padilla                                                -0.014
tz                                                        -0.046
lTr.fdose[0,10]                                            0.009
lTr.fdose(10,50]                                          -0.014
lTr.fdose(50,125]                                         -0.016
                                                          lA.mXXX43845202:1:F:2
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.089
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:8                 0.054
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.001
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.005
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.015
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.003
lD.sexF                                                    0.052
lD.sexM                                                    0.139
lD.Padilla                                                -0.073
tz                                                        -0.086
lTr.fdose[0,10]                                            0.197
lTr.fdose(10,50]                                           0.074
lTr.fdose(50,125]                                         -0.008
                                                          lA.XXX43845202:1:F:4
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
```

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lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                 0.096
lA.mridXtmonstdyXsexXtmpstds43845202:1:F:24                0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.004
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.010
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.014
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.033
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.040
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.009
lD.sexF                                                    0.160
lD.sexM                                                    0.214
lD.Padilla                                                -0.110
tz                                                        -0.092
lTr.fdose[0,10]                                            0.332
lTr.fdose(10,50]                                           0.190
lTr.fdose(50,125]                                          0.021
                                                          lA.XXX43845202:1:F:8
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.024
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.666666666666667 -0.007
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.011
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.018
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.040
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.049
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.010
lD.sexF                                                    0.119
lD.sexM                                                    0.133
lD.Padilla                                                -0.063
tz                                                        -0.021
lTr.fdose[0,10]                                            0.216
lTr.fdose(10,50]                                           0.231
lTr.fdose(50,125]                                          0.078
                                                          lA.XXX43845202:1:F:24
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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 -0.002
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:0.5               -0.003
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.000
```

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lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.006
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.013
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.016
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.003
lD.sexF                                                    0.007
lD.sexM                                                    0.006
lD.Padilla                                                -0.001
tz                                                         0.045
lTr.fdose[0,10]                                            0.023
lTr.fdose(10,50]                                           0.075
lTr.fdose(50,125]                                          0.149
                                                          lA.XXXP:1:M:0.6
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.219
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:1                  0.215
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.222
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.154
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.108
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                   -0.003
lD.sexM                                                   -0.001
lD.Padilla                                                -0.294
tz                                                         0.002
lTr.fdose[0,10]                                            0.000
lTr.fdose(10,50]                                          -0.036
lTr.fdose(50,125]                                         -0.002
                                                          lA.XXXP:1:M:0.5
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
```

```
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                  0.175
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:2                  0.179
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.122
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.084
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.002
lD.sexF                                                   -0.010
lD.sexM                                                   -0.009
lD.Padilla                                                -0.235
tz                                                        -0.006
lTr.fdose[0,10]                                           -0.016
lTr.fdose(10,50]                                          -0.046
lTr.fdose(50,125]                                         -0.008
                                                          lA.XXXP:1:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                  0.180
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:4                  0.128
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.091
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.004
lD.sexF                                                   -0.003
lD.sexM                                                   -0.003
lD.Padilla                                                -0.234
tz                                                         0.005
lTr.fdose[0,10]                                           -0.003
lTr.fdose(10,50]                                          -0.005
lTr.fdose(50,125]                                          0.002
                                                          lA.mXXXP:1:M:2
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                  0.149
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:6                  0.114
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.008
lD.sexF                                                    0.012
lD.sexM                                                    0.010
lD.Padilla                                                -0.248
tz                                                         0.030
lTr.fdose[0,10]                                            0.023
lTr.fdose(10,50]                                           0.079
lTr.fdose(50,125]                                          0.022
                                                          lA.XXXP:1:M:4
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                  0.107
lA.mridXtmonstdyXsexXtmpstdsPadilla:1:M:24                 0.011
lD.sexF                                                    0.030
lD.sexM                                                    0.025
lD.Padilla                                                -0.182
tz                                                         0.057
lTr.fdose[0,10]                                            0.054
lTr.fdose(10,50]                                           0.177
lTr.fdose(50,125]                                          0.044
```

```
                                                        lA.XXXP:1:M:6
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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                0.012
lD.sexF                                                   0.037
lD.sexM                                                   0.031
lD.Padilla                                               -0.134
tz                                                        0.066
lTr.fdose[0,10]                                           0.065
lTr.fdose(10,50]                                          0.213
lTr.fdose(50,125]                                         0.052
                                                        lA.XXXP:1:M:24 lD.sxF
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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.sexF                                                  0.008
lD.sexM                                                  0.007          0.561
lD.Padilla                                              -0.008         -0.305
tz                                                       0.013         -0.294
lTr.fdose[0,10]                                          0.014          0.580
lTr.fdose(10,50]                                         0.045          0.176
lTr.fdose(50,125]                                        0.011         -0.077
                                                        lD.sxM lD.Pdl tz
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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.sexF
lD.sexM
lD.Padilla                                                -0.567
tz                                                        -0.299  0.140
lTr.fdose[0,10]                                            0.602 -0.327 -0.211
lTr.fdose(10,50]                                           0.150 -0.040  0.291
lTr.fdose(50,125]                                         -0.080  0.038  0.439
                                                          lT.[0, lT.(10
lA.mridXtmonstdyXsexXtmpstds44122601:56:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:91:M:1
lA.mridXtmonstdyXsexXtmpstds44122601:28:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:56:F:1
lA.mridXtmonstdyXsexXtmpstds44122601:91: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.sexF
lD.sexM
lD.Padilla
tz
lTr.fdose[0,10]
```

```
lTr.fdose(10,50]                                          0.309
lTr.fdose(50,125]                                         0.002  0.236

Standardized Within-Group Residuals:
        Min          Q1         Med          Q3         Max
-3.68489513 -0.51504233 -0.03794978  0.55838586  4.30909381

Number of Observations: 545
Number of Groups: 7
```

Fit a model like the above, but without the term for "Padilla" for `lD`, to get a combined estimate.

```
> Par <- fixed.effects(drmod1f)
> Start <- list(fixed = c(getParms("^lA", Par), getParms("^lD",
+     Par)[-3], Par["tz"], getParms("^lTr", Par)))
> drmod1g <- nlme(cheact ~ tcmfn4(dose, tmpstds, lA = lA, tz = tz,
+     lD = lD, lTr = lTr), data = idta, fixed = list(lA ~ mridXtmonstdyXsexXtmpstds -
+     1, lD ~ sex - 1, tz ~ 1, lTr ~ fdose - 1), random = lD ~
+     1 | mridXtmonstdy, weights = varIdent(form = ~1 | mrid),
+     start = Start)
> tTabg <- summary(drmod1g)$tTable
> Intg <- intervals(drmod1g, which = "fixed")$fixed
> Intg90 <- intervals(drmod1g, which = "fixed", level = 0.9)$fixed
```

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. In these data, the BMD differs between sexes. Furthermore, the BMD from Padilla's data was substantially greater than that for males from the remainder of the dataset. Recovery half-life differs among doses, so half-life was estimated for three dose ranges. BMD has units mg/kg, and times are in hours. Some calculations to get `lD` and BMD for Padilla males:

```
> L <- matrix(0, nrow = 1, ncol = length(fixed.effects(drmod1f)))
> L[1, c(36, 37)] <- 1
> lDPad <- L %*% fixed.effects(drmod1f)
> lDPad.se <- sqrt(L %*% drmod1f$varFix %*% t(L))
```

species RAT

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

Female `lD` **(standard error)** 0.467944435532447 (0.105604105643102)

Male (registrant) `lD` **(standard error)** 0.189902478996314 (0.124688031633000)

Male (Padilla) `lD` 1.69767890704172 (0.166523599469985)

Male (combined) `lD` 0.460479219498932 (0.223408613219644)

Female BMD (95% CI) 1.59670867995452 (1.30789238053448, 1.94930305167788)

Female BMDL, the one-sided lower 95% CL 1.35065728595161

Male BMD (registrant) (95% CI) 1.20913167617279 (0.955345727350259, 1.53033542566774)

Male BMDL (registrant), the one-sided lower 95% CL 0.992336208309953

Male BMD (Padilla) (95% CI) 5.461256584951 (3.93733264180159, 7.57500729555418)

Male BMDL (Padilla), the one-sided lower 95% CL 4.15063560523923

Male BMD (combined) (95% CI) 1.58483328605725 (1.03868602256329, 2.41814801589088)

Male BMDL (combined), the one-sided lower 95% CL 1.11192092506735

`lTr dose: [0, 10] (standard error)` 0.602787316039804 (0.210278542299719)

`lTr dose: (10, 50] (standard error)` 1.40635107652717 (0.0920099215871179)

`lTr dose: (50, 125] (standard error)` 2.52189239446385 (0.0817795402191277)

Recovery Half-life dose: [0, 10 (95% CI)] 1.82720470606975 (1.22812534486664, 2.71851489087701)

Recovery Half-life dose: (10, 50 (95% CI)] 4.0810368112084 (3.42982192857038, 4.8558968370058)

Recovery Half-life dose: (50, 125 (95% CI)] 12.4521387395186 (10.6693895730429, 14.532767608372)

Save everything:

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

Save the results for incorporating into a database:

```
> carbaryl.oral.brain <- list(mrid = levels(dta$mrid), species = "RAT",
+     BMDs = list(female = list(lD = tTab["lD.sexF", 1], lD.se = tTab["lD.sexF",
+         2], BMD = exp(Ints["lD.sexF", 2]), BMD.CI = exp(Ints["lD.sexF",
+         c(1, 3)]), BMDL = exp(Ints90["lD.sexF", 1])), male = list(combined = list(lD = tTabg["lD.sexM"
+         1], lD.se = tTabg["lD.sexM", 2], BMD = exp(Intg["lD.sexM",
+         2]), BMD.CI = exp(Intg["lD.sexM", c(1, 3)]), BMDL = exp(Intg90["lD.sexM",
+         1])), registrant = list(lD = tTab["lD.sexM", 1], lD.se = tTab["lD.sexM",
+         2], BMD = exp(Ints["lD.sexM", 2]), BMD.CI = exp(Ints["lD.sexM",
+         c(1, 3)]), BMDL = exp(Ints90["lD.sexM", 1])), padilla = list(lD = lDPad,
+         lD.se = lDPad.se, BMD = exp(lDPad), BMD.CI = c(exp(lDPad +
+             qt(0.025, 498) * lDPad.se), exp(lDPad + qt(0.975,
+             498) * lDPad.se)), BMDL = exp(lDPad + qt(0.05, 498) *
+             lDPad.se)))), 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.brain, file = file.path("..", "..", "01Summaries",
+     "carbaryl.oral.brain.RData"))
```