

Program Summary - MixedModels.sas

Execution Environment

Author: u49579191
File: /home/u49579191/Consulting/MixedModels.sas
SAS Platform: Linux LIN X64 3.10.0-1062.9.1.el7.x86_64
SAS Host: ODAWS02-USW2.ODA.SAS.COM
SAS Version: 9.04.01M6P11072018
SAS Locale: en_US
Submission Time: 12/13/2021, 3:41:53 PM
Browser Host: C-71-57-42-24.HSD1.IL.COMCAST.NET
User Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/96.0.4664.93 Safari/537.36
Application Server: ODAMID02-USW2.ODA.SAS.COM

Code: MixedModels.sas

```
/*STAT 488-002 Consulting
Mixed Models to investigate the effects of aromatase inhibitors on fish fertility
Joelle Strom
Updated: Dec. 13, 2021*/

%MACRO SortAndPlot(DSName, Var);
  Proc Sort data=&DSName;
    By descending TRT TNK d;
  Run;

  Proc Sgpanel data=&DSName;
    Panelby TRT / columns=3 onepanel;
    Series x=d y=Pred / group=TNK groupLC=TRT break lineattrs=(pattern=solid);
    Keylegend / type=linecolor title="";
  Run;

  Proc Sgpanel data=&DSName;
    panelby TRT / columns=3 onepanel;
    vline d / response=&Var group=TRT stat=mean limitstat=stderr;
  Run;
%MEND;

Proc Import Datafile='/home/u49579191/Consulting/LetrozolelDat.csv' DBMS=CSV OUT=letrozolel;
  GETNAMES=YES;
RUN;

data letrozolel;
set letrozolel;
t = d; /* discrete copy of time */
T1 = ifn(d<=10, 0, d - 10); /* knot at day 10 for PWL analysis */
T2 = ifn(d<=14, 0, d - 14); /* knot at day 14 for PWL analysis */
sqrtegg = sqrt(Eggs_gFem);
PctFert = PctFert/100;
PctVBL = PctVBL/100;
PctFert = (PctFert * 432 + 0.5) / 433;
PctVBL = (PctVBL * 432 + 0.5) / 433;
run;

proc glimmix data=letrozolel plots=all;
  class TNK t TRT(ref='control');
  model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=letrozolel plots=all;
```

```

class TNK t TRT(ref='control');
model Eggs_gFem = TRT d T1 TRT*d TRT*T1/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Transforming the response variable decreases AIC over a model with untransformed variable and
also over the piece-wise regression (with knot at day 10)*/

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Log L decreased by changing variance matrix structure to AR(1)*/

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model Eggs_gFem = TRT d TRT*d/ s chisq distribution=poisson;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Attempted poisson link but did not converge*/

/*FINAL MODEL*/
proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
output out=MixedOut1 pred=Pred;
run;

%SortAndPlot(MixedOut1, sqrtegg);

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctFert = TRT d TRT*d/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctFert = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
run;
/*Standard regression performs better than piece-wise with knot at day 14*/

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');

```

```

model PctFert = TRT d TRT*d/ s chisq distribution=beta;
random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctFert = TRT d TRT*d/ s chisq distribution=beta;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
run;
/*Changing variance matrix structure increases AIC*/

/*FINAL MODEL*/
proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctFert = TRT d TRT*d/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
output out=MixedOut2 pred=Pred;
run;

%SortAndPlot(MixedOut2, PctFert);

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Piece-wise regression with knot at day 14 improves upon standard regression*/

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Log L reduced by changing variance matrix structure to AR(1)*

/*FINAL MODEL*/
proc glimmix data=letrozolel plots=all;
class TNK t TRT(ref='control');
model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
output out=MixedOut3 pred=Pred;
run;

%SortAndPlot(MixedOut3, PctVBL);

```

```

Proc Import Datafile='/home/u49579191/Consulting/Anastrozole1Dat.csv' DBMS=CSV OUT=anastrozole1;
GETNAMES=YES;
RUN;

data anastrozole1;
set anastrozole1;
t = d; /* discrete copy of time */
T1 = ifn(d<=10, 0, d - 10); /* knot at day 10 for PWL analysis */
sqrtegg = sqrt(Eggs_gFem);
PctFert = PctFert/100;
PctVBL = PctVBL/100;
PctFert = (PctFert * 432 + 0.5) / 433;
PctVBL = (PctVBL * 432 + 0.5) / 433;
run;

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model Eggs_gFem = TRT d T1 TRT*d TRT*T1/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Transforming the response variable decreases AIC over a model with untransformed variable and
also over the piece-wise regression (with knot at day 10)*/

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Log L decreased by changing variance matrix structure to AR(1)*/

/*FINAL MODEL*/
proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
random t / residual subject=TNK; /* measurements are repeated for subjects */
random intercept / subject=TNK; /* each subject gets its own intercept */
output out=MixedOut4 pred=Pred;
run;

%SortAndPlot(MixedOut4, sqrtegg);

proc glimmix data=anastrozole1 plots=all;
class TNK t TRT(ref='control');
model PctFert = TRT d TRT*d/ s chisq distribution=beta;
random t / residual subject=TNK; /* measurements are repeated for subjects */

```

```

random intercept / subject=TNK;           /* each subject gets its own intercept */
Nloptions maxiter=100 tech=nrridg;
run;

/*No obvious knot*/

proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK;    /* measurements are repeated for subjects */
  random intercept / subject=TNK;             /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=AR(1) subject=TNK;   /* measurements are repeated for subjects */
  random intercept / subject=TNK;               /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;
/*Changing variance matrix structure increases AIC*/

/*FINAL MODEL*/
proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual subject=TNK;    /* measurements are repeated for subjects */
  random intercept / subject=TNK;             /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
  output out=MixedOut5 pred=Pred;
run;

%SortAndPlot(MixedOut5, PctFert);

proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual subject=TNK;    /* measurements are repeated for subjects */
  random intercept / subject=TNK;             /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;

/*No obvious knot*/

proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK;   /* measurements are repeated for subjects */
  random intercept / subject=TNK;               /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=AR(1) subject=TNK;   /* measurements are repeated for subjects */
  random intercept / subject=TNK;               /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;
/*No parameter estimates with different variance structures*/

/*FINAL MODEL*/
proc glimmix data=anastrozole1 plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual subject=TNK;    /* measurements are repeated for subjects */
  random intercept / subject=TNK;             /* each subject gets its own intercept */

```

```

Nloptions maxiter=100 tech=nrridg;
  output out=MixedOut6 pred=Pred;
run;

%SortAndPlot(MixedOut6, PctVBL);

Proc Import Datafile='/home/u49579191/Consulting/ExemestaneDat.csv' DBMS=CSV OUT=exemestane;
  GETNAMES=YES;
RUN;

data exemestane;
set exemestane;
t = d; /* discrete copy of time */
sqrtegg = sqrt(Eggs_gFem);
PctFert = PctFert/100;
PctVBL = PctVBL/100;
PctFert = (PctFert * 432 + 0.5) / 433;
PctVBL = (PctVBL * 432 + 0.5) / 433;
run;

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
run;

/*No obvious knot*/

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Transforming the response variable decreases AIC over a model with untransformed variable*/

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
run;

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
run;
/*Log L decreased by changing variance matrix structure to AR(1)*/

/*FINAL MODEL*/
proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
  random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  output out=MixedOut7 pred=Pred;
run;

%SortAndPlot(MixedOut7, Eggs_gFem);

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */

```

```

Nloptions maxiter=100 tech=nrridg;
run;

/*No obvious knot*/

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;
/*Changing variance matrix structure to compound symmetry decreases AIC*/

/*FINAL MODEL*/
proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctFert = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
  output out=MixedOut8 pred=Pred;
run;

%SortAndPlot(MixedOut8, PctFert);

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;
/*No obvious knot*/

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;

proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;
run;
/*Log L reduced by changing variance matrix structure to compound symmetry*/

/*FINAL MODEL*/
proc glimmix data=exemestane plots=all;
  class TNK t TRT(ref='control');
  model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
  random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
  random intercept / subject=TNK; /* each subject gets its own intercept */
  Nloptions maxiter=100 tech=nrridg;

```

```

      output out=MixedOut9 pred=Pred;
run;

%SortAndPlot(MixedOut9, PctVBL);

```

Log: MixedModels.sas

Warnings (5)

Notes (228)

```

1      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
68
69      /*STAT 488-002 Consulting
70      Mixed Models to investigate the effects of aromatase inhibitors on fish fertility
71      Joelle Strom
72      Updated: Dec. 13, 2021*/
73
74
75      %MACRO SortAndPlot(DSName, Var);
76      Proc Sort data=&DSName;
77          By descending TRT TNK d;
78      Run;
79
80      Proc Sgpanel data=&DSName;
81          Panelby TRT / columns=3 onepanel;
82          Series x=d y=Pred / group=TNK groupLC=TRT break lineattrs=(pattern=solid);
83          Keylegend / type=linecolor title="";
84      Run;
85
86      Proc Sgpanel data=&DSName;
87          panelby TRT / columns=3 onepanel;
88          vline d / response=&Var group=TRT stat=mean limitstat=stderr;
89      Run;
90      %MEND;
91
92      Proc Import Datafile='/home/u49579191/Consulting/Letrozole1Dat.csv' DBMS=CSV OUT=letrozole1;
93          GETNAMES=YES;
94          RUN;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
WORK.PARMS.PARMS.SLIST.
Number of names found is less than number of variables found.
Name   is not a valid SAS name.
Name d is a duplicate.
Name TNK is a duplicate.
Name TRT is a duplicate.
Name TotEggs is a duplicate.
Name   is not a valid SAS name.
Problems were detected with provided names. See LOG.

95      ****
96      *  PRODUCT:  SAS
97      *  VERSION:  9.4
98      *  CREATOR:  External File Interface
99      *  DATE:    13DEC21
100     *  DESC:    Generated SAS Datastep Code
101     *  TEMPLATE SOURCE: (None Specified.)
102     ****
103     data WORK.LETROZOLEL ;
104     %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
105     infile '/home/u49579191/Consulting/Letrozole1Dat.csv' delimiter = ',' MISSOVER DSD lrecl=32767 firstobs=2 ;
106         informat DATE mmddyy10. ;
107         informat d best32. ;
108         informat TNK best32. ;
109         informat TRT $9. ;
110         informat "#FEM" best32. ;
111         informat Flt1 best32. ;
112         informat Flt2 best32. ;
113         informat Flt3 best32. ;
114         informat "Avg#Flt" best32. ;

```

```
115      informat AvgNFlt best32. ;
116      informat Snk1 best32. ;
117      informat Snk2 best32. ;
118      informat Snk3 best32. ;
119      informat "X Snk"N best32. ;
120      informat FS1 best32. ;
121      informat FS2 best32. ;
122      informat FS3 best32. ;
123      informat FertSnk best32. ;
124      informat VOL best32. ;
125      informat TotEggs best32. ;
126      informat VAR21 $1. ;
127      informat VAR22 best32. ;
128      informat VAR23 best32. ;
129      informat VAR24 $9. ;
130      informat VAR25 best32. ;
131      informat VAR26 $1. ;
132      informat femwt best32. ;
133      informat "#FEM"N best32. ;
134      informat "eggs/fem"N best32. ;
135      informat eggs_gfem best32. ;
136      informat "#fert"N best32. ;
137      informat "#vbl"N best32. ;
138      informat VAR33 $1. ;
139      informat "#fert/fem"N best32. ;
140      informat "#vbl/fem"N best32. ;
141      informat VAR36 $1. ;
142      informat "#fert/gfem"N best32. ;
143      informat "#vbl/gfem"N best32. ;
144      informat VAR39 $1. ;
145      informat PctFert best32. ;
146      informat PctVBL best32. ;
147      informat VAR42 $1. ;
148      format DATE mmddyy10. ;
149      format d best12. ;
150      format TNK best12. ;
151      format TRT $9. ;
152      format "#FEM"N best12. ;
153      format Flt1 best12. ;
154      format Flt2 best12. ;
155      format Flt3 best12. ;
156      format "Avg#Flt"N best12. ;
157      format AvgNFlt best12. ;
158      format Snk1 best12. ;
159      format Snk2 best12. ;
160      format Snk3 best12. ;
161      format "X Snk"N best12. ;
162      format FS1 best12. ;
163      format FS2 best12. ;
164      format FS3 best12. ;
165      format FertSnk best12. ;
166      format VOL best12. ;
167      format TotEggs best12. ;
168      format VAR21 $1. ;
169      format VAR22 best12. ;
170      format VAR23 best12. ;
171      format VAR24 $9. ;
172      format VAR25 best12. ;
173      format VAR26 $1. ;
174      format femwt best12. ;
175      format "#FEM"N best12. ;
176      format "eggs/fem"N best12. ;
177      format eggs_gfem best12. ;
178      format "#fert"N best12. ;
179      format "#vbl"N best12. ;
180      format VAR33 $1. ;
181      format "#fert/fem"N best12. ;
182      format "#vbl/fem"N best12. ;
183      format VAR36 $1. ;
184      format "#fert/gfem"N best12. ;
185      format "#vbl/gfem"N best12. ;
186      format VAR39 $1. ;
187      format PctFert best12. ;
188      format PctVBL best12. ;
189      format VAR42 $1. ;
190      input
```

```

191           DATE
192           d
193           TNK
194           TRT $ "#FEM"N
195           Flt1
196           Flt2
197           Flt3
198           "Avg#Flt"N
199           AvgNFlt
200           Snk1
201           Snk2
202           Snk3
203           "X Snk"N
204           FS1
205           FS2
206           FS3
207           FertSnk
208           VOL
209           TotEggs
210           VAR21 $ VAR22
211           VAR23
212           VAR24 $ VAR25
213           VAR26 $ femwt
214           "#FEM"N
215           "eggs/fem"N
216           eggs_gfem
217           "#fert"N
218           "#vbl"N
219           VAR33 $ "#fert/fem"N
220           "#vbl/fem"N
221           VAR36 $ "#fert/gfem"N
222           "#vbl/gfem"N
223           VAR39 $ PctFert
224           PctVBL
225           VAR42 $
226 ;
227 if _ERROR_ then call symputx('_EFIERR_',1); /* set ERROR detection macro variable */
228 run;

```

NOTE: The infile '/home/u49579191/Consulting/LetrozolelDat.csv' is:
 Filename=/home/u49579191/Consulting/LetrozolelDat.csv,
 Owner Name=u49579191,Group Name=oda,
 Access Permission=-rw-r--r--, Last Modified=07Nov2021:15:59:30,
 File Size (bytes)=62386

NOTE: 433 records were read from the infile '/home/u49579191/Consulting/LetrozolelDat.csv'.

The minimum record length was 41.
 The maximum record length was 161.

NOTE: The data set WORK.LETOZOOLEL has 433 observations and 41 variables.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
user cpu time	0.01 seconds
system cpu time	0.00 seconds
memory	11409.43k
OS Memory	35112.00k
Timestamp	12/13/2021 09:41:18 PM
Step Count	24 Switch Count 2
Page Faults	0
Page Reclaims	263
Page Swaps	0
Voluntary Context Switches	13
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	536

433 rows created in WORK.LETOZOOLEL from /home/u49579191/Consulting/LetrozolelDat.csv.

NOTE: WORK.LETROZOLEL data set was successfully created.
 NOTE: The data set WORK.LETROZOLEL has 433 observations and 41 variables.
 NOTE: PROCEDURE IMPORT used (Total process time):
 real time 0.15 seconds
 user cpu time 0.09 seconds
 system cpu time 0.02 seconds
 memory 11409.43k
 OS Memory 35112.00k
 Timestamp 12/13/2021 09:41:18 PM
 Step Count 24 Switch Count 19
 Page Faults 0
 Page Reclaims 5941
 Page Swaps 0
 Voluntary Context Switches 169
 Involuntary Context Switches 1
 Block Input Operations 128
 Block Output Operations 640

```

236
237   data letrozolel;
238   set letrozolel;
239   t = d;           /* discrete copy of time */
240   T1 = ifn(d<=10, 0, d - 10); /* knot at day 10 for PWL analysis */
241   T2 = ifn(d<=14, 0, d - 14); /* knot at day 14 for PWL analysis */
242   sqrtegg = sqrt(Eggs_gFem);
243   PctFert = PctFert/100;
244   PctVBL = PctVBL/100;
245   PctFert = (PctFert * 432 + 0.5) / 433;
246   PctVBL = (PctVBL * 432 + 0.5) / 433;
247   run;
  
```

NOTE: Missing values were generated as a result of performing an operation on missing values.
 Each place is given by: (Number of times) at (Line):(Column).
 1 at 240:22 1 at 241:22 1 at 242:11 1 at 243:18 1 at 244:16 1 at 245:20 1 at 246:18

NOTE: There were 433 observations read from the data set WORK.LETROZOLEL.
 NOTE: The data set WORK.LETROZOLEL has 433 observations and 45 variables.
 NOTE: DATA statement used (Total process time):

```

real time 0.00 seconds
user cpu time 0.00 seconds
system cpu time 0.00 seconds
memory 1324.21k
OS Memory 29104.00k
Timestamp 12/13/2021 09:41:18 PM
Step Count 25 Switch Count 2
Page Faults 0
Page Reclaims 126
Page Swaps 0
Voluntary Context Switches 10
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 528
  
```

```

248
249   proc glimmix data=letrozolel plots=all;
250     class TNK t TRT(ref='control');
251     model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
252     random t / residual subject=TNK; /* measurements are repeated for subjects */
253     random intercept / subject=TNK; /* each subject gets its own intercept */
254   run;
  
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time 3.08 seconds
user cpu time 0.29 seconds
system cpu time 0.09 seconds
memory 19959.28k
OS Memory 46636.00k
  
```

```

Timestamp          12/13/2021 09:41:21 PM
Step Count          26   Switch Count  48
Page Faults        0
Page Reclaims      25010
Page Swaps         0
Voluntary Context Switches 1466
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 4056

```

```

255
256 proc glimmix data=letrozolel plots=all;
257   class TNK t TRT(ref='control');
258   model Eggs_gFem = TRT d T1 TRT*d TRT*T1/ s chisq distribution=gaussian;
259   random t / residual subject=TNK; /* measurements are repeated for subjects */
260   random intercept / subject=TNK; /* each subject gets its own intercept */
261 run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          0.71 seconds
user cpu time     0.27 seconds
system cpu time   0.08 seconds
memory            12119.95k
OS Memory         46636.00k
Timestamp          12/13/2021 09:41:22 PM
Step Count          27   Switch Count  48
Page Faults        0
Page Reclaims      20614
Page Swaps         0
Voluntary Context Switches 1390
Involuntary Context Switches 58
Block Input Operations 0
Block Output Operations 3888

```

```

262
263 proc glimmix data=letrozolel plots=all;
264   class TNK t TRT(ref='control');
265   model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
266   random t / residual subject=TNK; /* measurements are repeated for subjects */
267   random intercept / subject=TNK; /* each subject gets its own intercept */
268 run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          0.65 seconds
user cpu time     0.30 seconds
system cpu time   0.07 seconds
memory            12233.96k
OS Memory         47148.00k
Timestamp          12/13/2021 09:41:22 PM
Step Count          28   Switch Count  48
Page Faults        0
Page Reclaims      20463
Page Swaps         0
Voluntary Context Switches 1304
Involuntary Context Switches 1
Block Input Operations 0
Block Output Operations 3960

```

```

269   /*Transforming the response variable decreases AIC over a model with untransformed variable and
270   also over the piece-wise regression (with knot at day 10)*/
271

```

```

272      proc glimmix data=letrozolel plots=all;
273          class TNK t TRT(ref='control');
274          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
275          random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
276          random intercept / subject=TNK; /* each subject gets its own intercept */
277      run;

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1),
missing random effects (n=1), missing subject effects (n=1).
NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time      0.51 seconds
      user cpu time  0.28 seconds
      system cpu time 0.07 seconds
      memory        11353.92k
      OS Memory     46368.00k
      Timestamp      12/13/2021 09:41:23 PM
      Step Count      29  Switch Count  42
      Page Faults    0
      Page Reclaims   20291
      Page Swaps      0
      Voluntary Context Switches 1290
      Involuntary Context Switches 1
      Block Input Operations 0
      Block Output Operations 3144

278
279      proc glimmix data=letrozolel plots=all;
280          class TNK t TRT(ref='control');
281          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
282          random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
283          random intercept / subject=TNK; /* each subject gets its own intercept */
284      run;

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1),
missing random effects (n=1), missing subject effects (n=1).
NOTE: Convergence criterion (GCONV=1E-8) satisfied.
NOTE: At least one element of the gradient is greater than 1e-3.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time      0.53 seconds
      user cpu time  0.31 seconds
      system cpu time 0.07 seconds
      memory        11361.15k
      OS Memory     46368.00k
      Timestamp      12/13/2021 09:41:23 PM
      Step Count      30  Switch Count  42
      Page Faults    0
      Page Reclaims   20268
      Page Swaps      0
      Voluntary Context Switches 1279
      Involuntary Context Switches 32
      Block Input Operations 0
      Block Output Operations 3144

285      /*Log L decreased by changing variance matrix structure to AR(1)*/
286
287      proc glimmix data=letrozolel plots=all;
288          class TNK t TRT(ref='control');
289          model Eggs_gFem = TRT d TRT*d/ s chisq distribution=poisson;
290          random t / residual subject=TNK; /* measurements are repeated for subjects */
291          random intercept / subject=TNK; /* each subject gets its own intercept */
292      run;

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1),
missing random effects (n=1), missing subject effects (n=1).
NOTE: An R-side variance component is confounded with the profiled variance.
NOTE: Did not converge.
NOTE: PROCEDURE GLIMMIX used (Total process time):

```

```

real time      0.10 seconds
user cpu time  0.10 seconds
system cpu time 0.01 seconds
memory        3697.50k
OS Memory     40708.00k
Timestamp      12/13/2021 09:41:23 PM
Step Count      31  Switch Count  10
Page Faults    0
Page Reclaims   1044
Page Swaps      0
Voluntary Context Switches 69
Involuntary Context Switches 1
Block Input Operations 0
Block Output Operations 1344

293      /*Attempted poisson link but did not converge*/
294
295      /*FINAL MODEL*/
296      proc glimmix data=letrozole1 plots=all;
297          class TNK t TRT(ref='control');
298          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
299          random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
300          random intercept / subject=TNK; /* each subject gets its own intercept */
301          output out=MixedOut1 pred=Pred;
302      run;

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1),
      missing random effects (n=1), missing subject effects (n=1).
NOTE: Convergence criterion (GCONV=1E-8) satisfied.
NOTE: At least one element of the gradient is greater than 1e-3.
NOTE: The data set WORK.MIXEDOUT1 has 433 observations and 46 variables.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time      0.53 seconds
      user cpu time  0.31 seconds
      system cpu time 0.06 seconds
      memory        12202.81k
      OS Memory     46888.00k
      Timestamp      12/13/2021 09:41:24 PM
      Step Count      32  Switch Count  46
      Page Faults    0
      Page Reclaims   20372
      Page Swaps      0
      Voluntary Context Switches 1306
      Involuntary Context Switches 2
      Block Input Operations 0
      Block Output Operations 3944

303
304      %SortAndPlot(MixedOut1, sqrtegg);

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT1.
NOTE: The data set WORK.MIXEDOUT1 has 433 observations and 46 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time      0.00 seconds
      user cpu time  0.00 seconds
      system cpu time 0.00 seconds
      memory        1733.56k
      OS Memory     39608.00k
      Timestamp      12/13/2021 09:41:24 PM
      Step Count      33  Switch Count  2
      Page Faults    0
      Page Reclaims   119
      Page Swaps      0
      Voluntary Context Switches 13
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 520

NOTE: PROCEDURE SG PANEL used (Total process time):
      real time      0.33 seconds

```

```

user cpu time      0.08 seconds
system cpu time   0.01 seconds
memory            3435.81k
OS Memory         40376.00k
Timestamp          12/13/2021 09:41:24 PM
Step Count          34  Switch Count  10
Page Faults        0
Page Reclaims      778
Page Swaps         0
Voluntary Context Switches 1502
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1768

```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT1.

NOTE: PROCEDURE SGMPANEL used (Total process time):

```

real time          0.29 seconds
user cpu time     0.06 seconds
system cpu time   0.01 seconds
memory            3776.09k
OS Memory         40632.00k
Timestamp          12/13/2021 09:41:25 PM
Step Count          35  Switch Count  14
Page Faults        0
Page Reclaims      845
Page Swaps         0
Voluntary Context Switches 441
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1680

```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT1.

```

305
306      proc glimmix data=letrozolel plots=all;
307          class TNK t TRT(ref='control');
308          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
309          random t / residual subject=TNK; /* measurements are repeated for subjects */
310          random intercept / subject=TNK; /* each subject gets its own intercept */
311          Nloptions maxiter=100 tech=nrridg;
312      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          0.84 seconds
user cpu time     0.62 seconds
system cpu time   0.07 seconds
memory            11978.29k
OS Memory         47396.00k
Timestamp          12/13/2021 09:41:25 PM
Step Count          36  Switch Count  44
Page Faults        0
Page Reclaims      20416
Page Swaps         0
Voluntary Context Switches 1189
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 3432

```

```

313
314      proc glimmix data=letrozolel plots=all;
315          class TNK t TRT(ref='control');
316          model PctFert = TRT d T2 TRT*T2/ s chisq distribution=beta;
317          random t / residual subject=TNK; /* measurements are repeated for subjects */
318          random intercept / subject=TNK; /* each subject gets its own intercept */
319          Nloptions maxiter=100 tech=nrridg;
320      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).
 NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
 NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.87 seconds
user cpu time	0.65 seconds
system cpu time	0.09 seconds
memory	11722.96k
OS Memory	47396.00k
Timestamp	12/13/2021 09:41:26 PM
Step Count	37 Switch Count 44
Page Faults	0
Page Reclaims	20469
Page Swaps	0
Voluntary Context Switches	1179
Involuntary Context Switches	6
Block Input Operations	0
Block Output Operations	3368

```
321      /*Standard regression performs better than piece-wise with knot at day 14*/
322
323  proc glimmix data=letrozolel plots=all;
324      class TNK t TRT(ref='control');
325      model PctFert = TRT d TRT*d/ s chisq distribution=beta;
326      random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
327      random intercept / subject=TNK;          /* each subject gets its own intercept */
328      Nloptions maxiter=100 tech=nrridg;
329
run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	2.15 seconds
user cpu time	1.91 seconds
system cpu time	0.09 seconds
memory	11705.73k
OS Memory	47396.00k
Timestamp	12/13/2021 09:41:28 PM
Step Count	38 Switch Count 44
Page Faults	0
Page Reclaims	20357
Page Swaps	0
Voluntary Context Switches	1212
Involuntary Context Switches	18
Block Input Operations	0
Block Output Operations	3440

```
330
331  proc glimmix data=letrozolel plots=all;
332      class TNK t TRT(ref='control');
333      model PctFert = TRT d TRT*d/ s chisq distribution=beta;
334      random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
335      random intercept / subject=TNK;          /* each subject gets its own intercept */
336      Nloptions maxiter=100 tech=nrridg;
337
run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	1.06 seconds
user cpu time	0.86 seconds
system cpu time	0.07 seconds
memory	11707.31k
OS Memory	47396.00k
Timestamp	12/13/2021 09:41:30 PM
Step Count	39 Switch Count 44
Page Faults	0

Page Reclaims	20384
Page Swaps	0
Voluntary Context Switches	1185
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	3368

```

338      /*Changing variance matrix structure increases AIC*/
339
340      /*FINAL MODEL*/
341      proc glimmix data=letrozolel plots=all;
342          class TNK t TRT(ref='control');
343          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
344          random t / residual subject=TNK;    /* measurements are repeated for subjects */
345          random intercept / subject=TNK;      /* each subject gets its own intercept */
346          Nloptions maxiter=100 tech=nrridg;
347          output out=MixedOut2 pred=Pred;
348      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: The data set WORK.MIXEDOUT2 has 433 observations and 46 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.90 seconds
user cpu time	0.67 seconds
system cpu time	0.10 seconds
memory	12551.25k
OS Memory	47916.00k
Timestamp	12/13/2021 09:41:30 PM
Step Count	40 Switch Count 48
Page Faults	0
Page Reclaims	20524
Page Swaps	0
Voluntary Context Switches	1213
Involuntary Context Switches	74
Block Input Operations	0
Block Output Operations	4224

```

349
350      %SortAndPlot(MixedOut2, PctFert);

```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT2.

NOTE: The data set WORK.MIXEDOUT2 has 433 observations and 46 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
user cpu time	0.01 seconds
system cpu time	0.00 seconds
memory	1732.78k
OS Memory	40120.00k
Timestamp	12/13/2021 09:41:30 PM
Step Count	41 Switch Count 2
Page Faults	0
Page Reclaims	94
Page Swaps	0
Voluntary Context Switches	12
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	520

NOTE: PROCEDURE SGPMANL used (Total process time):

real time	0.19 seconds
user cpu time	0.08 seconds
system cpu time	0.01 seconds
memory	3457.37k
OS Memory	40888.00k
Timestamp	12/13/2021 09:41:31 PM
Step Count	42 Switch Count 10
Page Faults	0
Page Reclaims	538

Page Swaps	0
Voluntary Context Switches	1505
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1704

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT2.

NOTE: PROCEDURE SGANEL used (Total process time):

real time	0.18 seconds
user cpu time	0.06 seconds
system cpu time	0.01 seconds
memory	3769.75k
OS Memory	40888.00k
Timestamp	12/13/2021 09:41:31 PM
Step Count	43 Switch Count 14
Page Faults	0
Page Reclaims	712
Page Swaps	0
Voluntary Context Switches	441
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1696

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT2.

```
351
352      proc glimmix data=letrozolel plots=all;
353          class TNK t TRT(ref='control');
354          model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
355          random t / residual subject=TNK; /* measurements are repeated for subjects */
356          random intercept / subject=TNK; /* each subject gets its own intercept */
357      run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.62 seconds
user cpu time	0.43 seconds
system cpu time	0.08 seconds
memory	11959.48k
OS Memory	47396.00k
Timestamp	12/13/2021 09:41:31 PM
Step Count	44 Switch Count 44
Page Faults	0
Page Reclaims	20400
Page Swaps	0
Voluntary Context Switches	1254
Involuntary Context Switches	1
Block Input Operations	0
Block Output Operations	3416

```
358
359      proc glimmix data=letrozolel plots=all;
360          class TNK t TRT(ref='control');
361          model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
362          random t / residual subject=TNK; /* measurements are repeated for subjects */
363          random intercept / subject=TNK; /* each subject gets its own intercept */
364      run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.67 seconds
user cpu time	0.47 seconds
system cpu time	0.08 seconds
memory	11728.00k
OS Memory	47396.00k

```

Timestamp          12/13/2021 09:41:32 PM
Step Count          45  Switch Count  44
Page Faults        0
Page Reclaims      20453
Page Swaps         0
Voluntary Context Switches 1235
Involuntary Context Switches 3
Block Input Operations 0
Block Output Operations 3432

```

```

365     /*Piece-wise regression with knot at day 14 improves upon standard regression*/
366
367 proc glimmix data=letrozolel plots=all;
368   class TNK t TRT(ref='control');
369   model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
370   random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
371   random intercept / subject=TNK;           /* each subject gets its own intercept */
372 run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Did not converge.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          0.74 seconds
user cpu time      0.70 seconds
system cpu time    0.04 seconds
memory             3287.75k
OS Memory          40956.00k
Timestamp          12/13/2021 09:41:33 PM
Step Count          46  Switch Count  6
Page Faults        0
Page Reclaims      905
Page Swaps         0
Voluntary Context Switches 41
Involuntary Context Switches 2
Block Input Operations 0
Block Output Operations 824

```

```

373
374 proc glimmix data=letrozolel plots=all;
375   class TNK t TRT(ref='control');
376   model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
377   random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
378   random intercept / subject=TNK;           /* each subject gets its own intercept */
379 run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          1.00 seconds
user cpu time      0.79 seconds
system cpu time    0.08 seconds
memory             11717.64k
OS Memory          47396.00k
Timestamp          12/13/2021 09:41:34 PM
Step Count          47  Switch Count  44
Page Faults        0
Page Reclaims      20408
Page Swaps         0
Voluntary Context Switches 1252
Involuntary Context Switches 1
Block Input Operations 0
Block Output Operations 3368

```

```

380 /*Log L reduced by changing variance matrix structure to AR(1)*/
381
382 /*FINAL MODEL*/
383 proc glimmix data=letrozolel plots=all;

```

```
384      class TNK t TRT(ref='control');
385      model PctVBL = TRT d T2 TRT*d TRT*T2/ s chisq distribution=beta;
386      random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
387      random intercept / subject=TNK; /* each subject gets its own intercept */
388      output out=MixedOut3 pred=Pred;
389      run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1), missing fixed effects (n=1), missing random effects (n=1), missing subject effects (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: The data set WORK.MIXEDOUT3 has 433 observations and 46 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```
real time      1.00 seconds
user cpu time  0.80 seconds
system cpu time 0.09 seconds
memory        12542.15k
OS Memory     47916.00k
Timestamp      12/13/2021 09:41:35 PM
Step Count      48  Switch Count  48
Page Faults    0
Page Reclaims  20463
Page Swaps     0
Voluntary Context Switches 1269
Involuntary Context Switches 1
Block Input Operations 0
Block Output Operations 4144
```

390

```
391      %SortAndPlot(MixedOut3, PctVBL);
```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT3.

NOTE: The data set WORK.MIXEDOUT3 has 433 observations and 46 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      0.00 seconds
user cpu time  0.00 seconds
system cpu time 0.00 seconds
memory        1740.46k
OS Memory     40632.00k
Timestamp      12/13/2021 09:41:35 PM
Step Count      49  Switch Count  2
Page Faults    0
Page Reclaims  95
Page Swaps     0
Voluntary Context Switches 11
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 520
```

NOTE: PROCEDURE SG PANEL used (Total process time):

```
real time      0.20 seconds
user cpu time  0.08 seconds
system cpu time 0.01 seconds
memory        3479.40k
OS Memory     41400.00k
Timestamp      12/13/2021 09:41:35 PM
Step Count      50  Switch Count  10
Page Faults    0
Page Reclaims  537
Page Swaps     0
Voluntary Context Switches 1504
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1728
```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT3.

NOTE: PROCEDURE SG PANEL used (Total process time):

```
real time      0.16 seconds
user cpu time  0.06 seconds
system cpu time 0.01 seconds
```

```

memory          3789.25k
OS Memory      41400.00k
Timestamp       12/13/2021 09:41:35 PM
Step Count      51   Switch Count 14
Page Faults    0
Page Reclaims  661
Page Swaps     0
Voluntary Context Switches 445
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1696

```

NOTE: There were 433 observations read from the data set WORK.MIXEDOUT3.

```

392
393      Proc Import Datafile='/home/u49579191/Consulting/AnastrozolelDat.csv' DBMS=CSV OUT=anastrozolel;
394      GETNAMES=YES;
395      RUN;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to WORK.PARMS.PARMS.SLIST.
396      ****
397      * PRODUCT:  SAS
398      * VERSION: 9.4
399      * CREATOR: External File Interface
400      * DATE: 13DEC21
401      * DESC: Generated SAS Datastep Code
402      * TEMPLATE SOURCE: (None Specified.)
403      ****
404      data WORK.ANASTROZOLEL ;
405      %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
406      infile '/home/u49579191/Consulting/AnastrozolelDat.csv' delimiter = ',' MISSOVER DSD lrecl=32767 firstobs=2 ;
407      informat d best32. ;
408      informat TNK best32. ;
409      informat TRT $8. ;
410      informat TotEggs best32. ;
411      informat femwt best32. ;
412      informat "#FEM"N best32. ;
413      informat "eggs/fem"N best32. ;
414      informat Eggs_gFem best32. ;
415      informat "#fert"N best32. ;
416      informat "#vbl"N best32. ;
417      informat "#fert/fem"N best32. ;
418      informat "#vbl/fem"N best32. ;
419      informat "#fert/gfem"N best32. ;
420      informat "#vbl/gfem"N best32. ;
421      informat PctFert best32. ;
422      informat PctVBL best32. ;
423      format d best12. ;
424      format TNK best12. ;
425      format TRT $8. ;
426      format TotEggs best12. ;
427      format femwt best12. ;
428      format "#FEM"N best12. ;
429      format "eggs/fem"N best12. ;
430      format Eggs_gFem best12. ;
431      format "#fert"N best12. ;
432      format "#vbl"N best12. ;
433      format "#fert/fem"N best12. ;
434      format "#vbl/fem"N best12. ;
435      format "#fert/gfem"N best12. ;
436      format "#vbl/gfem"N best12. ;
437      format PctFert best12. ;
438      format PctVBL best12. ;
439      input
440          d
441          TNK
442          TRT $
443          TotEggs
444          femwt
445          "#FEM"N
446          "eggs/fem"N
447          Eggs_gFem
448          "#fert"N
449          "#vbl"N
450          "#fert/fem"N

```

```

451          "#vbl/fem" N
452          "#fert/gfem" N
453          "#vbl/gfem" N
454          PctFert
455          PctVBL
456      ;
457      if _ERROR_ then call symputx('_EFIERR_',1); /* set ERROR detection macro variable */
458      run;

```

NOTE: The infile '/home/u49579191/Consulting/AnastrozolelDat.csv' is:
 Filename=/home/u49579191/Consulting/AnastrozolelDat.csv,
 Owner Name=u49579191, Group Name=oda,
 Access Permission=-rw-r--r--, Last Modified=15Nov2021:12:27:09,
 File Size (bytes)=52297

NOTE: 432 records were read from the infile '/home/u49579191/Consulting/AnastrozolelDat.csv'.
 The minimum record length was 42.
 The maximum record length was 153.

NOTE: The data set WORK.ANASTROZOLEL has 432 observations and 16 variables.

NOTE: DATA statement used (Total process time):

real time	0.00	seconds
user cpu time	0.01	seconds
system cpu time	0.00	seconds
memory	9531.87	k
OS Memory	44580.00	k
Timestamp	12/13/2021	09:41:35 PM
Step Count	52	Switch Count 2
Page Faults	0	
Page Reclaims	117	
Page Swaps	0	
Voluntary Context Switches	13	
Involuntary Context Switches	1	
Block Input Operations	0	
Block Output Operations	272	

432 rows created in WORK.ANASTROZOLEL from /home/u49579191/Consulting/AnastrozolelDat.csv.

NOTE: WORK.ANASTROZOLEL data set was successfully created.

NOTE: The data set WORK.ANASTROZOLEL has 432 observations and 16 variables.

NOTE: PROCEDURE IMPORT used (Total process time):

real time	0.06	seconds
user cpu time	0.06	seconds
system cpu time	0.01	seconds
memory	9531.87	k
OS Memory	44580.00	k
Timestamp	12/13/2021	09:41:35 PM
Step Count	52	Switch Count 8
Page Faults	0	
Page Reclaims	2694	
Page Swaps	0	
Voluntary Context Switches	92	
Involuntary Context Switches	2	
Block Input Operations	104	
Block Output Operations	288	

```

459
460      data anastrozolel;
461      set anastrozolel;
462      t = d;           /* discrete copy of time */
463      T1 = ifn(d<=10, 0, d - 10); /* knot at day 10 for PWL analysis */
464      sqrtegg = sqrt(Eggs_gFem);
465      PctFert = PctFert/100;
466      PctVBL = PctVBL/100;
467      PctFert = (PctFert * 432 + 0.5) / 433;
468      PctVBL = (PctVBL * 432 + 0.5) / 433;
469      run;

```

NOTE: Missing values were generated as a result of performing an operation on missing values.
 Each place is given by: (Number of times) at (Line):(Column).

1 at 465:18 1 at 466:16 1 at 467:20 1 at 468:18

NOTE: There were 432 observations read from the data set WORK.ANASTROZOLEL.

NOTE: The data set WORK.ANASTROZOLEL has 432 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
user cpu time	0.00 seconds
system cpu time	0.00 seconds
memory	976.59k
OS Memory	40624.00k
Timestamp	12/13/2021 09:41:35 PM
Step Count	53 Switch Count 2
Page Faults	0
Page Reclaims	108
Page Swaps	0
Voluntary Context Switches	15
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	264

470

```
471 proc glimmix data=anastrozolel plots=all;
472   class TNK t TRT(ref='control');
473   model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
474   random t / residual subject=TNK; /* measurements are repeated for subjects */
475   random intercept / subject=TNK; /* each subject gets its own intercept */
476 run;
```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (GCONV=1E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.52 seconds
user cpu time	0.30 seconds
system cpu time	0.08 seconds
memory	12175.12k
OS Memory	48428.00k
Timestamp	12/13/2021 09:41:36 PM
Step Count	54 Switch Count 48
Page Faults	0
Page Reclaims	20460
Page Swaps	0
Voluntary Context Switches	1353
Involuntary Context Switches	1
Block Input Operations	0
Block Output Operations	3896

477

```
478 proc glimmix data=anastrozolel plots=all;
479   class TNK t TRT(ref='control');
480   model Eggs_gFem = TRT d T1 TRT*d TRT*T1/ s chisq distribution=gaussian;
481   random t / residual subject=TNK; /* measurements are repeated for subjects */
482   random intercept / subject=TNK; /* each subject gets its own intercept */
483 run;
```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (GCONV=1E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.46 seconds
user cpu time	0.27 seconds
system cpu time	0.07 seconds
memory	11925.06k
OS Memory	48172.00k
Timestamp	12/13/2021 09:41:36 PM
Step Count	55 Switch Count 48
Page Faults	0
Page Reclaims	20541
Page Swaps	0
Voluntary Context Switches	1304
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	3896

```

484
485 proc glimmix data=anastrozole1 plots=all;
486   class TNK t TRT(ref='control');
487   model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
488   random t / residual subject=TNK; /* measurements are repeated for subjects */
489   random intercept / subject=TNK; /* each subject gets its own intercept */
490 run;

```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (GCONV=1E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.44 seconds
user cpu time	0.26 seconds
system cpu time	0.06 seconds
memory	11917.37k
OS Memory	48428.00k
Timestamp	12/13/2021 09:41:37 PM
Step Count	56 Switch Count 48
Page Faults	0
Page Reclaims	20460
Page Swaps	0
Voluntary Context Switches	1246
Involuntary Context Switches	2
Block Input Operations	0
Block Output Operations	3888

```

491 /*Transforming the response variable decreases AIC over a model with untransformed variable and
492 also over the piece-wise regression (with knot at day 10)*/
493

```

```

494 proc glimmix data=anastrozole1 plots=all;
495   class TNK t TRT(ref='control');
496   model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
497   random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
498   random intercept / subject=TNK; /* each subject gets its own intercept */
499 run;

```

NOTE: Convergence criterion (GCONV=1E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.47 seconds
user cpu time	0.29 seconds
system cpu time	0.07 seconds
memory	11194.89k
OS Memory	47648.00k
Timestamp	12/13/2021 09:41:37 PM
Step Count	57 Switch Count 42
Page Faults	0
Page Reclaims	20279
Page Swaps	0
Voluntary Context Switches	1199
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	3096

```

500
501 proc glimmix data=anastrozole1 plots=all;
502   class TNK t TRT(ref='control');
503   model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
504   random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
505   random intercept / subject=TNK; /* each subject gets its own intercept */
506 run;

```

WARNING: Obtaining minimum variance quadratic unbiased estimates as starting values for the covariance parameters failed.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.04 seconds
user cpu time	0.03 seconds
system cpu time	0.01 seconds
memory	1977.21k
OS Memory	40372.00k

```

Timestamp          12/13/2021 09:41:37 PM
Step Count          58  Switch Count  4
Page Faults        0
Page Reclaims      778
Page Swaps         0
Voluntary Context Switches 26
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 544

```

```

507      /*Log L decreased by changing variance matrix structure to AR(1)*/
508
509      /*FINAL MODEL*/
510      proc glimmix data=anastrozole1 plots=all;
511          class TNK t TRT(ref='control');
512          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
513          random t / residual subject=TNK; /* measurements are repeated for subjects */
514          random intercept / subject=TNK; /* each subject gets its own intercept */
515          output out=MixedOut4 pred=Pred;
516      run;

```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (GCONV=1E-8) satisfied.

NOTE: The data set WORK.MIXEDOUT4 has 432 observations and 20 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time          0.45 seconds
user cpu time     0.28 seconds
system cpu time   0.05 seconds
memory            12529.09k
OS Memory         48948.00k
Timestamp          12/13/2021 09:41:38 PM
Step Count          59  Switch Count  52
Page Faults        0
Page Reclaims      20623
Page Swaps         0
Voluntary Context Switches 1276
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 4432

```

```

517
518      %SortAndPlot(MixedOut4, sqrtegg);

```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT4.

NOTE: The data set WORK.MIXEDOUT4 has 432 observations and 20 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time          0.00 seconds
user cpu time     0.00 seconds
system cpu time   0.00 seconds
memory            932.06k
OS Memory         40368.00k
Timestamp          12/13/2021 09:41:38 PM
Step Count          60  Switch Count  2
Page Faults        0
Page Reclaims      96
Page Swaps         0
Voluntary Context Switches 13
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264

```

NOTE: PROCEDURE SG PANEL used (Total process time):

```

real time          0.17 seconds
user cpu time     0.08 seconds
system cpu time   0.01 seconds
memory            2933.68k
OS Memory         41916.00k
Timestamp          12/13/2021 09:41:38 PM
Step Count          61  Switch Count  10
Page Faults        0

```

Page Reclaims	614
Page Swaps	0
Voluntary Context Switches	1503
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1128

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT4.

NOTE: PROCEDURE SGPNAL used (Total process time):

real time	0.15 seconds
user cpu time	0.06 seconds
system cpu time	0.00 seconds
memory	3244.04k
OS Memory	41916.00k
Timestamp	12/13/2021 09:41:38 PM
Step Count	62 Switch Count 13
Page Faults	0
Page Reclaims	743
Page Swaps	0
Voluntary Context Switches	445
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1112

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT4.

```

519
520      proc glimmix data=anastrozolel plots=all;
521          class TNK t TRT(ref='control');
522          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
523          random t / residual subject=TNK; /* measurements are repeated for subjects */
524          random intercept / subject=TNK; /* each subject gets its own intercept */
525          Nloptions maxiter=100 tech=nrridg;
526      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.71 seconds
user cpu time	0.52 seconds
system cpu time	0.08 seconds
memory	11809.01k
OS Memory	48164.00k
Timestamp	12/13/2021 09:41:39 PM
Step Count	63 Switch Count 44
Page Faults	0
Page Reclaims	20368
Page Swaps	0
Voluntary Context Switches	1214
Involuntary Context Switches	1
Block Input Operations	0
Block Output Operations	3440

```

527
528      /*No obvious knot*/
529
530      proc glimmix data=anastrozolel plots=all;
531          class TNK t TRT(ref='control');
532          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
533          random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
534          random intercept / subject=TNK; /* each subject gets its own intercept */
535          Nloptions maxiter=100 tech=nrridg;
536      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

WARNING: Obtaining minimum variance quadratic unbiased estimates as starting values for the covariance parameters failed.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.04 seconds
user cpu time	0.03 seconds

```

system cpu time      0.00 seconds
memory              2087.68k
OS Memory           40884.00k
Timestamp           12/13/2021 09:41:39 PM
Step Count          64  Switch Count  4
Page Faults         0
Page Reclaims       778
Page Swaps          0
Voluntary Context Switches 30
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 536

```

```

537
538      proc glimmix data=anastrozole1 plots=all;
539          class TNK t TRT(ref='control');
540          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
541          random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
542          random intercept / subject=TNK;           /* each subject gets its own intercept */
543          Nloptions maxiter=100 tech=nrridg;
544      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).
 WARNING: Obtaining minimum variance quadratic unbiased estimates as starting values for the covariance parameters failed.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time            0.04 seconds
user cpu time        0.03 seconds
system cpu time      0.01 seconds
memory              2072.03k
OS Memory           40884.00k
Timestamp           12/13/2021 09:41:39 PM
Step Count          65  Switch Count  4
Page Faults         0
Page Reclaims       779
Page Swaps          0
Voluntary Context Switches 30
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 536

```

```

545      /*Changing variance matrix structure increases AIC*/
546
547      /*FINAL MODEL*/
548      proc glimmix data=anastrozole1 plots=all;
549          class TNK t TRT(ref='control');
550          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
551          random t / residual subject=TNK; /* measurements are repeated for subjects */
552          random intercept / subject=TNK;           /* each subject gets its own intercept */
553          Nloptions maxiter=100 tech=nrridg;
554          output out=MixedOut5 pred=Pred;
555      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).
 NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: The data set WORK.MIXEDOUT5 has 432 observations and 20 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time            0.69 seconds
user cpu time        0.50 seconds
system cpu time      0.08 seconds
memory              12191.43k
OS Memory           48684.00k
Timestamp           12/13/2021 09:41:40 PM
Step Count          66  Switch Count  48
Page Faults         0
Page Reclaims       20465
Page Swaps          0
Voluntary Context Switches 1207
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 3984

```

```
556  
557      %SortAndPlot(MixedOut5, PctFert);
```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT5.

NOTE: The data set WORK.MIXEDOUT5 has 432 observations and 20 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
user cpu time	0.00 seconds
system cpu time	0.00 seconds
memory	933.34k
OS Memory	40624.00k
Timestamp	12/13/2021 09:41:40 PM
Step Count	67 Switch Count 2
Page Faults	0
Page Reclaims	96
Page Swaps	0
Voluntary Context Switches	14
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	264

NOTE: PROCEDURE SG PANEL used (Total process time):

real time	0.17 seconds
user cpu time	0.07 seconds
system cpu time	0.01 seconds
memory	2976.06k
OS Memory	42172.00k
Timestamp	12/13/2021 09:41:40 PM
Step Count	68 Switch Count 10
Page Faults	0
Page Reclaims	613
Page Swaps	0
Voluntary Context Switches	1502
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1160

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT5.

NOTE: PROCEDURE SG PANEL used (Total process time):

real time	0.15 seconds
user cpu time	0.06 seconds
system cpu time	0.01 seconds
memory	3259.20k
OS Memory	42172.00k
Timestamp	12/13/2021 09:41:40 PM
Step Count	69 Switch Count 13
Page Faults	0
Page Reclaims	747
Page Swaps	0
Voluntary Context Switches	446
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1136

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT5.

```
558  
559      proc glimmix data=anastrozole1 plots=all;  
560          class TNK t TRT(ref='control');  
561          model PctVBL = TRT d TRT*d/ s chisq distribution=beta;  
562          random t / residual subject=TNK; /* measurements are repeated for subjects */  
563          random intercept / subject=TNK; /* each subject gets its own intercept */  
564          Nloptions maxiter=100 tech=nrridg;  
565      run;
```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time      0.79 seconds
user cpu time  0.60 seconds
system cpu time 0.09 seconds
memory        11869.64k
OS Memory     48164.00k
Timestamp      12/13/2021 09:41:41 PM
Step Count      70  Switch Count  44
Page Faults    0
Page Reclaims   20338
Page Swaps      0
Voluntary Context Switches 1227
Involuntary Context Switches 2
Block Input Operations 0
Block Output Operations 3496

```

```

566
567      /*No obvious knot*/
568
569      proc glimmix data=anastrozole1 plots=all;
570          class TNK t TRT(ref='control');
571          model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
572          random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
573          random intercept / subject=TNK;           /* each subject gets its own intercept */
574          Nloptions maxiter=100 tech=nrridg;
575      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

WARNING: Obtaining minimum variance quadratic unbiased estimates as starting values for the covariance parameters failed.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time      0.04 seconds
user cpu time  0.04 seconds
system cpu time 0.00 seconds
memory        2077.71k
OS Memory     40884.00k
Timestamp      12/13/2021 09:41:41 PM
Step Count      71  Switch Count  4
Page Faults    0
Page Reclaims   780
Page Swaps      0
Voluntary Context Switches 30
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 536

```

```

576
577      proc glimmix data=anastrozole1 plots=all;
578          class TNK t TRT(ref='control');
579          model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
580          random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
581          random intercept / subject=TNK;           /* each subject gets its own intercept */
582          Nloptions maxiter=100 tech=nrridg;
583      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

WARNING: Obtaining minimum variance quadratic unbiased estimates as starting values for the covariance parameters failed.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time      0.04 seconds
user cpu time  0.05 seconds
system cpu time 0.01 seconds
memory        2116.75k
OS Memory     40884.00k
Timestamp      12/13/2021 09:41:41 PM
Step Count      72  Switch Count  4
Page Faults    0
Page Reclaims   779
Page Swaps      0
Voluntary Context Switches 27
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 536

```

```

584      /*No parameter estimates with different variance structures*/
585
586      /*FINAL MODEL*/
587      proc glimmix data=anastrozole1 plots=all;
588          class TNK t TRT(ref='control');
589          model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
590          random t / residual subject=TNK;      /* measurements are repeated for subjects */
591          random intercept / subject=TNK;        /* each subject gets its own intercept */
592          Nloptions maxiter=100 tech=nrridg;
593          output out=MixedOut6 pred=Pred;
594      run;

```

NOTE: Some observations are not used in the analysis because of: missing response values (n=1).

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: The data set WORK.MIXEDOUT6 has 432 observations and 20 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.81 seconds
user cpu time	0.61 seconds
system cpu time	0.08 seconds
memory	12163.53k
OS Memory	48684.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	73 Switch Count 48
Page Faults	0
Page Reclaims	20456
Page Swaps	0
Voluntary Context Switches	1256
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	4104

595

```
%SortAndPlot(MixedOut6, PctVBL);
```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT6.

NOTE: The data set WORK.MIXEDOUT6 has 432 observations and 20 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
user cpu time	0.00 seconds
system cpu time	0.00 seconds
memory	935.15k
OS Memory	40624.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	74 Switch Count 2
Page Faults	0
Page Reclaims	96
Page Swaps	0
Voluntary Context Switches	13
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	264

NOTE: PROCEDURE SG PANEL used (Total process time):

real time	0.19 seconds
user cpu time	0.09 seconds
system cpu time	0.02 seconds
memory	2959.40k
OS Memory	42172.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	75 Switch Count 10
Page Faults	0
Page Reclaims	617
Page Swaps	0
Voluntary Context Switches	1508
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1104

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT6.

NOTE: PROCEDURE SGMPANEL used (Total process time):

real time	0.15 seconds
user cpu time	0.05 seconds
system cpu time	0.01 seconds
memory	3246.26k
OS Memory	42172.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	76 Switch Count 13
Page Faults	0
Page Reclaims	742
Page Swaps	0
Voluntary Context Switches	442
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1128

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT6.

```

597
598      Proc Import Datafile='/home/u49579191/Consulting/ExemestaneDat.csv' DBMS=CSV OUT=exemestane;
599      GETNAMES=YES;
600      RUN;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
WORK.PARMS.PARMS.SLIST.
601      ****
602      * PRODUCT: SAS
603      * VERSION: 9.4
604      * CREATOR: External File Interface
605      * DATE: 13DEC21
606      * DESC: Generated SAS Datastep Code
607      * TEMPLATE SOURCE: (None Specified.)
608      ****
609      data WORK.EXEMESTANE ;
610      %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
611      infile '/home/u49579191/Consulting/ExemestaneDat.csv' delimiter = ',' MISSOVER DSD lrecl=32767 firstobs=2 ;
612          informat d best32. ;
613          informat TNK best32. ;
614          informat TRT $7. ;
615          informat TotEggs best32. ;
616          informat femwt best32. ;
617          informat "#FEM"N best32. ;
618          informat "eggs/fem"N best32. ;
619          informat Eggs_gFem best32. ;
620          informat "#fert"N best32. ;
621          informat "#vbl"N best32. ;
622          informat "#fert/fem"N best32. ;
623          informat "#vbl/fem"N best32. ;
624          informat "#fert/gfem"N best32. ;
625          informat "#vbl/gfem"N best32. ;
626          informat PctFert best32. ;
627          informat PctVBL best32. ;
628          format d best12. ;
629          format TNK best12. ;
630          format TRT $7. ;
631          format TotEggs best12. ;
632          format femwt best12. ;
633          format "#FEM"N best12. ;
634          format "eggs/fem"N best12. ;
635          format Eggs_gFem best12. ;
636          format "#fert"N best12. ;
637          format "#vbl"N best12. ;
638          format "#fert/fem"N best12. ;
639          format "#vbl/fem"N best12. ;
640          format "#fert/gfem"N best12. ;
641          format "#vbl/gfem"N best12. ;
642          format PctFert best12. ;
643          format PctVBL best12. ;
644      input
645          d
646          TNK
647          TRT $
648          TotEggs
649          femwt

```

```

650          "#FEM" N
651          "eggs/fem" N
652          Eggs_gFem
653          "#fert" N
654          "#vbl" N
655          "#fert/fem" N
656          "#vbl/fem" N
657          "#fert/gfem" N
658          "#vbl/gfem" N
659          PctFert
660          PctVBL
661      ;
662      if _ERROR_ then call symputx('_EFIERR_',1); /* set ERROR detection macro variable */
663      run;

```

NOTE: The infile '/home/u49579191/Consulting/ExemestaneDat.csv' is:
 Filename=/home/u49579191/Consulting/ExemestaneDat.csv,
 Owner Name=u49579191, Group Name=oda,
 Access Permission=-rw-r--r--, Last Modified=15Nov2021:13:01:12,
 File Size (bytes)=50762

NOTE: 432 records were read from the infile '/home/u49579191/Consulting/ExemestaneDat.csv'.
 The minimum record length was 43.
 The maximum record length was 155.

NOTE: The data set WORK.EXEMESTANE has 432 observations and 16 variables.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
user cpu time	0.01 seconds
system cpu time	0.00 seconds
memory	9423.93k
OS Memory	44836.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	77 Switch Count 2
Page Faults	0
Page Reclaims	100
Page Swaps	0
Voluntary Context Switches	11
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	272

432 rows created in WORK.EXEMESTANE from /home/u49579191/Consulting/ExemestaneDat.csv.

NOTE: WORK.EXEMESTANE data set was successfully created.

NOTE: The data set WORK.EXEMESTANE has 432 observations and 16 variables.

NOTE: PROCEDURE IMPORT used (Total process time):

real time	0.07 seconds
user cpu time	0.07 seconds
system cpu time	0.00 seconds
memory	9423.93k
OS Memory	44836.00k
Timestamp	12/13/2021 09:41:42 PM
Step Count	77 Switch Count 8
Page Faults	0
Page Reclaims	2598
Page Swaps	0
Voluntary Context Switches	86
Involuntary Context Switches	47
Block Input Operations	104
Block Output Operations	288

```

664
665      data exemestane;
666      set exemestane;
667      t = d;                      /* discrete copy of time */
668      sqrtegg = sqrt(Eggs_gFem);
669      PctFert = PctFert/100;
670      PctVBL = PctVBL/100;
671      PctFert = (PctFert * 432 + 0.5) / 433;
672      PctVBL = (PctVBL * 432 + 0.5) / 433;
673      run;

```

NOTE: There were 432 observations read from the data set WORK.EXEMESTANE.

NOTE: The data set WORK.EXEMESTANE has 432 observations and 18 variables.

NOTE: DATA statement used (Total process time):

```
real time      0.00 seconds
user cpu time  0.00 seconds
system cpu time 0.01 seconds
memory        992.28k
OS Memory     40880.00k
Timestamp      12/13/2021 09:41:42 PM
Step Count      78  Switch Count  2
Page Faults    0
Page Reclaims   107
Page Swaps      0
Voluntary Context Switches 14
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264
```

674

```
675 proc glimmix data=exemestane plots=all;
676   class TNK t TRT(ref='control');
677   model Eggs_gFem = TRT d TRT*d/ s chisq distribution=gaussian;
678   random t / residual subject=TNK; /* measurements are repeated for subjects */
679   random intercept / subject=TNK; /* each subject gets its own intercept */
680 run;
```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```
real time      0.46 seconds
user cpu time  0.27 seconds
system cpu time 0.07 seconds
memory        12232.89k
OS Memory     48940.00k
Timestamp      12/13/2021 09:41:43 PM
Step Count      79  Switch Count  48
Page Faults    0
Page Reclaims   20475
Page Swaps      0
Voluntary Context Switches 1248
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 3888
```

681

```
682 /*No obvious knot*/
683
684 proc glimmix data=exemestane plots=all;
685   class TNK t TRT(ref='control');
686   model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
687   random t / residual subject=TNK; /* measurements are repeated for subjects */
688   random intercept / subject=TNK; /* each subject gets its own intercept */
689 run;
```

NOTE: An R-side variance component is confounded with the profiled variance.

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```
real time      0.45 seconds
user cpu time  0.27 seconds
system cpu time 0.07 seconds
memory        11961.06k
OS Memory     48684.00k
Timestamp      12/13/2021 09:41:43 PM
Step Count      80  Switch Count  48
Page Faults    0
Page Reclaims   20512
Page Swaps      0
Voluntary Context Switches 1271
Involuntary Context Switches 6
```

```

      Block Input Operations          0
      Block Output Operations       3888

690      /*Transforming the response variable decreases AIC over a model with untransformed variable*/
691
692      proc glimmix data=exemestane plots=all;
693          class TNK t TRT(ref='control');
694          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
695          random t / residual type=CS subject=TNK;    /* measurements are repeated for subjects */
696          random intercept / subject=TNK;    /* each subject gets its own intercept */
697      run;

NOTE: Convergence criterion (ABSGCONV=0.00001) satisfied.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time          0.45 seconds
      user cpu time     0.28 seconds
      system cpu time   0.06 seconds
      memory            11147.43k
      OS Memory         47904.00k
      Timestamp         12/13/2021 09:41:43 PM
      Step Count        81  Switch Count  42
      Page Faults       0
      Page Reclaims     20255
      Page Swaps        0
      Voluntary Context Switches 1233
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 3096

698
699      proc glimmix data=exemestane plots=all;
700          class TNK t TRT(ref='control');
701          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
702          random t / residual type=AR(1) subject=TNK;    /* measurements are repeated for subjects */
703          random intercept / subject=TNK;    /* each subject gets its own intercept */
704      run;

NOTE: Convergence criterion (GCONV=1E-8) satisfied.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time          0.54 seconds
      user cpu time     0.32 seconds
      system cpu time   0.09 seconds
      memory            11146.81k
      OS Memory         47904.00k
      Timestamp         12/13/2021 09:41:44 PM
      Step Count        82  Switch Count  42
      Page Faults       0
      Page Reclaims     20261
      Page Swaps        0
      Voluntary Context Switches 1264
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 3168

705      /*Log L decreased by changing variance matrix structure to AR(1)*/
706
707      /*FINAL MODEL*/
708      proc glimmix data=exemestane plots=all;
709          class TNK t TRT(ref='control');
710          model sqrtegg = TRT d TRT*d/ s chisq distribution=gaussian;
711          random t / residual type=AR(1) subject=TNK;    /* measurements are repeated for subjects */
712          random intercept / subject=TNK;    /* each subject gets its own intercept */
713          output out=MixedOut7 pred=Pred;
714      run;

```

NOTE: Convergence criterion (GCONV=1E-8) satisfied.
 NOTE: The data set WORK.MIXEDOUT7 has 432 observations and 19 variables.

NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	0.50 seconds
user cpu time	0.32 seconds
system cpu time	0.06 seconds
memory	11805.18k
OS Memory	48424.00k
Timestamp	12/13/2021 09:41:45 PM
Step Count	83 Switch Count 46
Page Faults	0
Page Reclaims	20377
Page Swaps	0
Voluntary Context Switches	1275
Involuntary Context Switches	3
Block Input Operations	0
Block Output Operations	3688

715
716 %SortAndPlot(MixedOut7, Eggs_gFem);

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT7.

NOTE: The data set WORK.MIXEDOUT7 has 432 observations and 19 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
user cpu time	0.00 seconds
system cpu time	0.00 seconds
memory	932.34k
OS Memory	40368.00k
Timestamp	12/13/2021 09:41:45 PM
Step Count	84 Switch Count 2
Page Faults	0
Page Reclaims	97
Page Swaps	0
Voluntary Context Switches	14
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	264

NOTE: PROCEDURE SG PANEL used (Total process time):

real time	0.17 seconds
user cpu time	0.07 seconds
system cpu time	0.02 seconds
memory	2980.59k
OS Memory	41916.00k
Timestamp	12/13/2021 09:41:45 PM
Step Count	85 Switch Count 10
Page Faults	0
Page Reclaims	613
Page Swaps	0
Voluntary Context Switches	1499
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1144

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT7.

NOTE: PROCEDURE SG PANEL used (Total process time):

real time	0.15 seconds
user cpu time	0.05 seconds
system cpu time	0.00 seconds
memory	3234.06k
OS Memory	41916.00k
Timestamp	12/13/2021 09:41:45 PM
Step Count	86 Switch Count 13
Page Faults	0
Page Reclaims	743
Page Swaps	0
Voluntary Context Switches	441
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1112

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT7.

```

717
718 proc glimmix data=exemestane plots=all;
719   class TNK t TRT(ref='control');
720   model PctFert = TRT d TRT*d/ s chisq distribution=beta;
721   random t / residual subject=TNK; /* measurements are repeated for subjects */
722   random intercept / subject=TNK; /* each subject gets its own intercept */
723   Nloptions maxiter=100 tech=nrridg;
724 run;

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time          0.78 seconds
      user cpu time     0.60 seconds
      system cpu time   0.08 seconds
      memory            11788.57k
      OS Memory         48164.00k
      Timestamp         12/13/2021 09:41:46 PM
      Step Count        87  Switch Count  44
      Page Faults       0
      Page Reclaims     20396
      Page Swaps        0
      Voluntary Context Switches 1200
      Involuntary Context Switches 2
      Block Input Operations 0
      Block Output Operations 3432

725
726 /*No obvious knot*/
727
728 proc glimmix data=exemestane plots=all;
729   class TNK t TRT(ref='control');
730   model PctFert = TRT d TRT*d/ s chisq distribution=beta;
731   random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
732   random intercept / subject=TNK; /* each subject gets its own intercept */
733   Nloptions maxiter=100 tech=nrridg;
734 run;

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
NOTE: Estimated G matrix is not positive definite.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time          1.03 seconds
      user cpu time     0.84 seconds
      system cpu time   0.07 seconds
      memory            11612.78k
      OS Memory         48420.00k
      Timestamp         12/13/2021 09:41:47 PM
      Step Count        88  Switch Count  44
      Page Faults       0
      Page Reclaims     20382
      Page Swaps        0
      Voluntary Context Switches 1190
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 3328

735
736 proc glimmix data=exemestane plots=all;
737   class TNK t TRT(ref='control');
738   model PctFert = TRT d TRT*d/ s chisq distribution=beta;
739   random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
740   random intercept / subject=TNK; /* each subject gets its own intercept */
741   Nloptions maxiter=100 tech=nrridg;
742 run;

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time          1.04 seconds

```

```

user cpu time      0.85 seconds
system cpu time   0.07 seconds
memory           11535.50k
OS Memory        48420.00k
Timestamp         12/13/2021 09:41:48 PM
Step Count          89  Switch Count  44
Page Faults        0
Page Reclaims     20387
Page Swaps         0
Voluntary Context Switches 1192
Involuntary Context Switches 1
Block Input Operations 0
Block Output Operations 3432

743      /*Changing variance matrix structure to compound symmetry decreases AIC*/
744
745      /*FINAL MODEL*/
746      proc glimmix data=exemestane plots=all;
747          class TNK t TRT(ref='control');
748          model PctFert = TRT d TRT*d/ s chisq distribution=beta;
749          random t / residual type=CS subject=TNK;    /* measurements are repeated for subjects */
750          random intercept / subject=TNK;             /* each subject gets its own intercept */
751          Nloptions maxiter=100 tech=nrrridg;
752          output out=MixedOut8 pred=Pred;
753      run;

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
NOTE: Estimated G matrix is not positive definite.
NOTE: The data set WORK.MIXEDOUT8 has 432 observations and 19 variables.
NOTE: PROCEDURE GLIMMIX used (Total process time):
      real time      1.02 seconds
      user cpu time  0.83 seconds
      system cpu time 0.08 seconds
      memory         12085.82k
      OS Memory      49196.00k
      Timestamp       12/13/2021 09:41:49 PM
      Step Count      90  Switch Count  48
      Page Faults    0
      Page Reclaims  20503
      Page Swaps     0
      Voluntary Context Switches 1220
      Involuntary Context Switches 2
      Block Input Operations 0
      Block Output Operations 3864

754      %SortAndPlot(MixedOut8, PctFert);

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT8.
NOTE: The data set WORK.MIXEDOUT8 has 432 observations and 19 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time      0.00 seconds
      user cpu time  0.00 seconds
      system cpu time 0.00 seconds
      memory         932.68k
      OS Memory      41136.00k
      Timestamp       12/13/2021 09:41:49 PM
      Step Count      91  Switch Count  2
      Page Faults    0
      Page Reclaims  98
      Page Swaps     0
      Voluntary Context Switches 14
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 264

NOTE: PROCEDURE SG PANEL used (Total process time):
      real time      0.17 seconds
      user cpu time  0.08 seconds
      system cpu time 0.01 seconds

```

```

memory          2918.90k
OS Memory      42684.00k
Timestamp       12/13/2021 09:41:49 PM
Step Count      92  Switch Count  10
Page Faults    0
Page Reclaims   615
Page Swaps     0
Voluntary Context Switches 1500
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1072

```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT8.

NOTE: PROCEDURE SGMPANEL used (Total process time):

```

real time        0.15 seconds
user cpu time   0.05 seconds
system cpu time 0.01 seconds
memory          3235.56k
OS Memory      42684.00k
Timestamp       12/13/2021 09:41:49 PM
Step Count      93  Switch Count  13
Page Faults    0
Page Reclaims   744
Page Swaps     0
Voluntary Context Switches 440
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1120

```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT8.

```

756
757      proc glimmix data=exemestane plots=all;
758      class TNK t TRT(ref='control');
759      model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
760      random t / residual subject=TNK; /* measurements are repeated for subjects */
761      random intercept / subject=TNK; /* each subject gets its own intercept */
762      Nloptions maxiter=100 tech=nrridg;
763      run;

```

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: PROCEDURE GLIMMIX used (Total process time):

```

real time        0.83 seconds
user cpu time   0.65 seconds
system cpu time 0.07 seconds
memory          11792.82k
OS Memory      48676.00k
Timestamp       12/13/2021 09:41:50 PM
Step Count      94  Switch Count  44
Page Faults    0
Page Reclaims   20339
Page Swaps     0
Voluntary Context Switches 1273
Involuntary Context Switches 3
Block Input Operations 0
Block Output Operations 3488

```

```

764
765      /*No obvious knot*/
766
767      proc glimmix data=exemestane plots=all;
768      class TNK t TRT(ref='control');
769      model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
770      random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
771      random intercept / subject=TNK; /* each subject gets its own intercept */
772      Nloptions maxiter=100 tech=nrridg;
773      run;

```

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.

NOTE: Estimated G matrix is not positive definite.
 NOTE: PROCEDURE GLIMMIX used (Total process time):
 real time 1.04 seconds
 user cpu time 0.86 seconds
 system cpu time 0.08 seconds
 memory 11574.53k
 OS Memory 48676.00k
 Timestamp 12/13/2021 09:41:51 PM
 Step Count 95 Switch Count 44
 Page Faults 0
 Page Reclaims 20341
 Page Swaps 0
 Voluntary Context Switches 1194
 Involuntary Context Switches 6
 Block Input Operations 0
 Block Output Operations 3328

```

774
775 proc glimmix data=exemestane plots=all;
776   class TNK t TRT(ref='control');
777   model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
778   random t / residual type=AR(1) subject=TNK; /* measurements are repeated for subjects */
779   random intercept / subject=TNK; /* each subject gets its own intercept */
780   Nloptions maxiter=100 tech=nrrridg;
781 run;
  
```

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
 NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	1.10 seconds
user cpu time	0.92 seconds
system cpu time	0.07 seconds
memory	11520.68k
OS Memory	48676.00k
Timestamp	12/13/2021 09:41:52 PM
Step Count	96 Switch Count 44
Page Faults	0
Page Reclaims	20343
Page Swaps	0
Voluntary Context Switches	1281
Involuntary Context Switches	2
Block Input Operations	0
Block Output Operations	3488

```

782 /*Log L reduced by changing variance matrix structure to compound symmetry*/
783
784 /*FINAL MODEL*/
785 proc glimmix data=exemestane plots=all;
786   class TNK t TRT(ref='control');
787   model PctVBL = TRT d TRT*d/ s chisq distribution=beta;
788   random t / residual type=CS subject=TNK; /* measurements are repeated for subjects */
789   random intercept / subject=TNK; /* each subject gets its own intercept */
790   Nloptions maxiter=100 tech=nrrridg;
791   output out=MixedOut9 pred=Pred;
792 run;
  
```

NOTE: Convergence criterion (PCONV=1.11022E-8) satisfied.
 NOTE: Estimated G matrix is not positive definite.
 NOTE: The data set WORK.MIXEDOUT9 has 432 observations and 19 variables.
 NOTE: PROCEDURE GLIMMIX used (Total process time):

real time	1.05 seconds
user cpu time	0.88 seconds
system cpu time	0.07 seconds
memory	12010.68k
OS Memory	49196.00k
Timestamp	12/13/2021 09:41:53 PM
Step Count	97 Switch Count 48
Page Faults	0
Page Reclaims	20463
Page Swaps	0
Voluntary Context Switches	1219

```
Involuntary Context Switches      2
Block Input Operations          0
Block Output Operations       3832
```

```
793
794      %SortAndPlot(MixedOut9, PctVBL);
```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT9.

NOTE: The data set WORK.MIXEDOUT9 has 432 observations and 19 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time          0.00 seconds
user cpu time     0.00 seconds
system cpu time   0.00 seconds
memory           934.56k
OS Memory        41136.00k
Timestamp         12/13/2021 09:41:53 PM
Step Count          98  Switch Count  2
Page Faults        0
Page Reclaims      97
Page Swaps          0
Voluntary Context Switches 13
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264
```

NOTE: PROCEDURE SGPNAL used (Total process time):

```
real time          0.16 seconds
user cpu time     0.06 seconds
system cpu time   0.02 seconds
memory           2964.06k
OS Memory        42684.00k
Timestamp         12/13/2021 09:41:53 PM
Step Count          99  Switch Count  10
Page Faults        0
Page Reclaims      618
Page Swaps          0
Voluntary Context Switches 1502
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1072
```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT9.

NOTE: PROCEDURE SGPNAL used (Total process time):

```
real time          0.14 seconds
user cpu time     0.06 seconds
system cpu time   0.00 seconds
memory           3231.62k
OS Memory        42684.00k
Timestamp         12/13/2021 09:41:53 PM
Step Count          100  Switch Count  13
Page Faults        0
Page Reclaims      742
Page Swaps          0
Voluntary Context Switches 436
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 1120
```

NOTE: There were 432 observations read from the data set WORK.MIXEDOUT9.

```
795
796
797
798
799
800
801
802
803
804
805      **End;
```

806

807

OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;

817

Results: MixedModels.sas**The GLIMMIX Procedure**

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	eggs_gfem
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4133.7038698	.	1.95E-14

Convergence criterion (ABSGCONV=0.00001) satisfied.

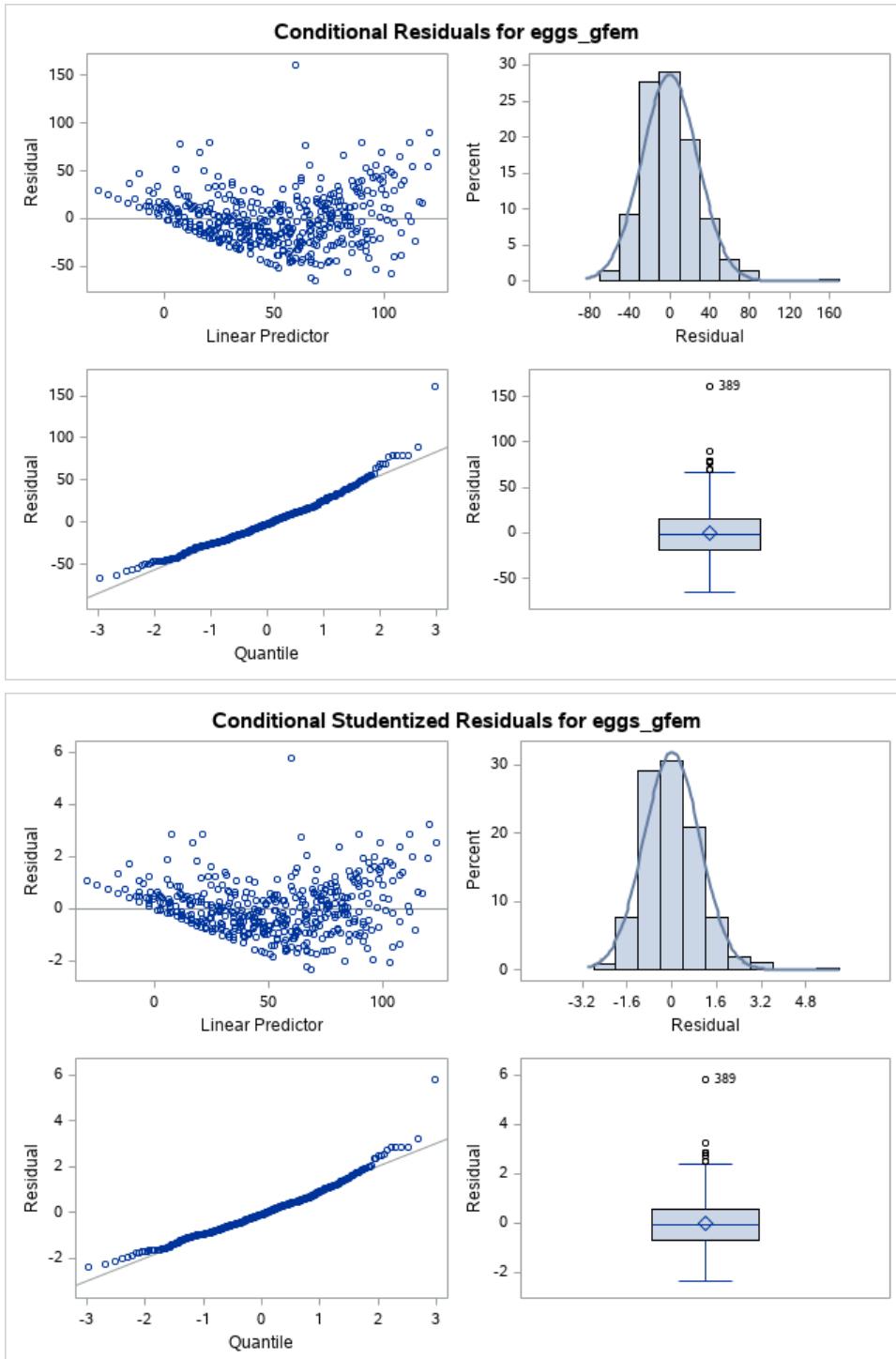
Fit Statistics	
-2 Res Log Likelihood	4133.70
AIC (smaller is better)	4137.70
AICC (smaller is better)	4137.73
BIC (smaller is better)	4139.48
CAIC (smaller is better)	4141.48
HQIC (smaller is better)	4137.95
Generalized Chi-Square	343733.8
Gener. Chi-Square / DF	806.89

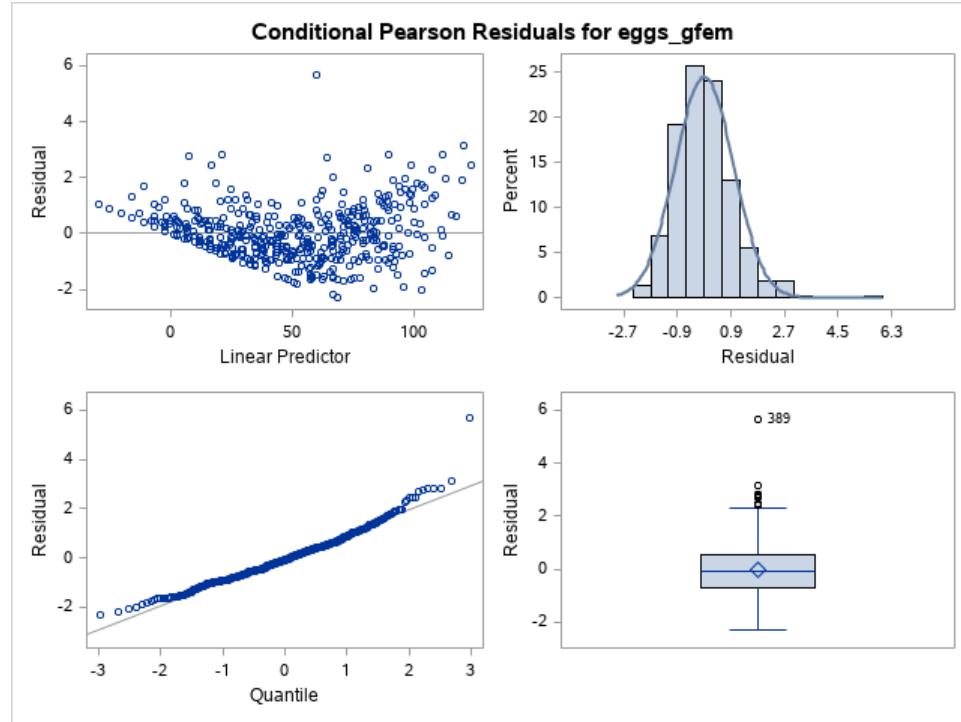
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	251.08	103.99
Residual (VC)		806.89	56.2868

Solutions for Fixed Effects

Effect	TRT	Solutions for Fixed Effects		DF	t Value	Pr > t
		Estimate	Standard Error			
Intercept		98.2917	8.1070	15	12.12	<.0001
TRT Effect	0.075ug/k	7.9662	2.0650	411	0.69	0.4876
TRT	0.75ug/kg	2.2289	11.4650	411	0.19	0.8460
TRT	control	0
d		-3.1767	0.3420	411	-9.29	<.0001
d*TRT	0.075ug/k	-1.0301	0.4836	411	-2.13	0.0338
d*TRT	0.75ug/kg	-1.4144	0.4836	411	-2.92	0.0036
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.51	0.26	0.7734	0.7735
d	1	411	408.72	408.72	<.0001	<.0001
d*TRT	2	411	9.15	4.57	0.0103	0.0108





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	eggs_gfem
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4030.7049511	.	7.37E-14

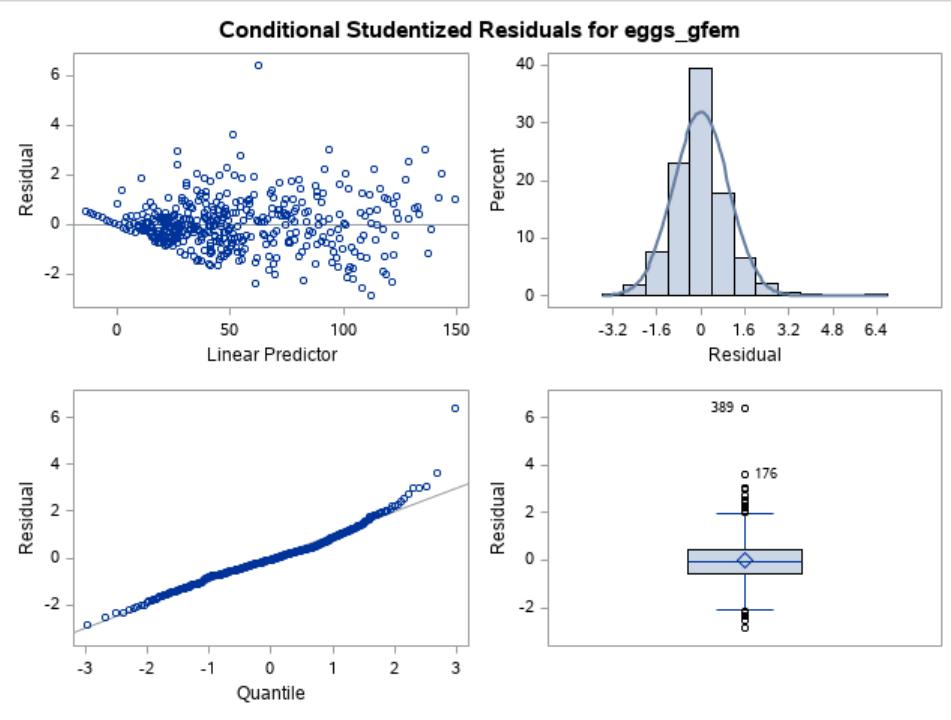
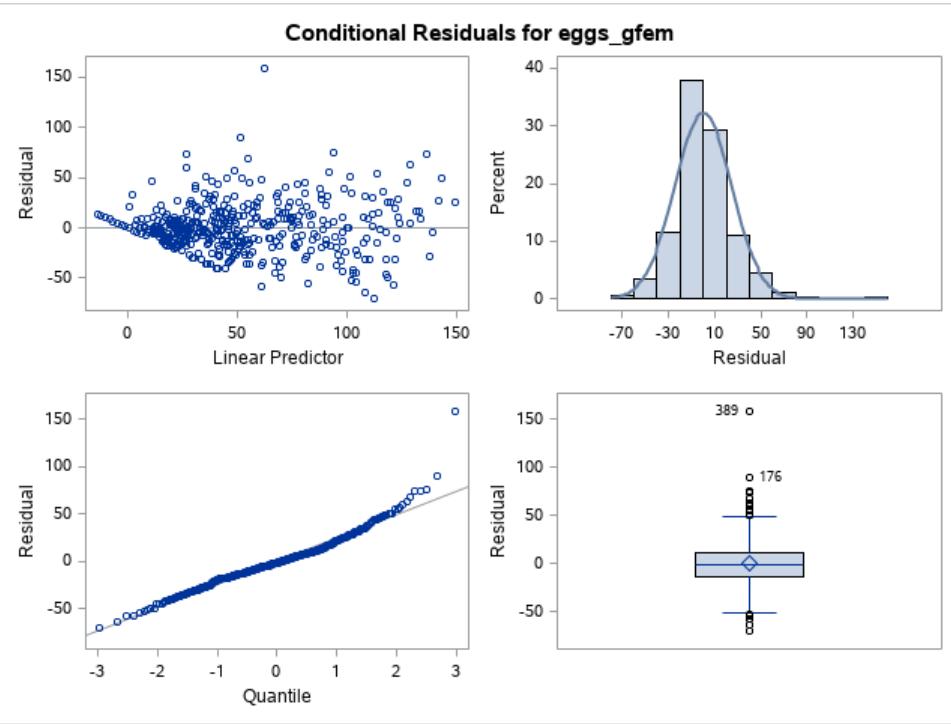
Convergence criterion (ABSGCONV=0.00001) satisfied.

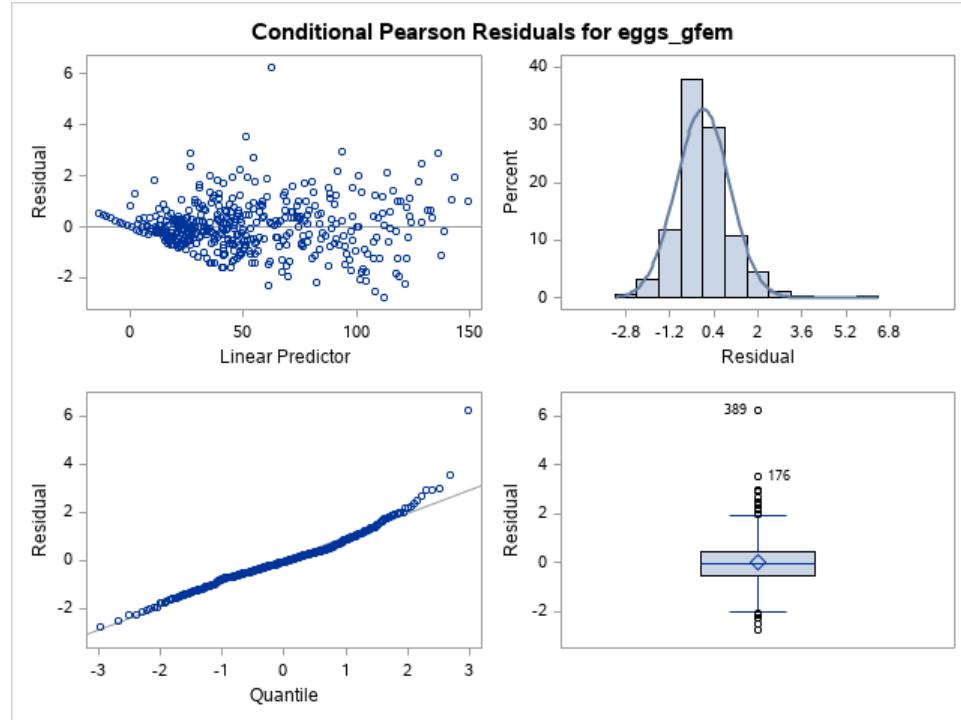
Fit Statistics	
-2 Res Log Likelihood	4030.70
AIC (smaller is better)	4034.70
AICC (smaller is better)	4034.73
BIC (smaller is better)	4036.49
CAIC (smaller is better)	4038.49
HQIC (smaller is better)	4034.95
Generalized Chi-Square	272262.8
Gener. Chi-Square / DF	643.65

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	257.89	103.98
Residual (VC)		643.65	45.0643

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		121.01	9.3049	15	13.00	<.0001
TRT	0.075ug/k	19.6579	13.1591	408	1.49	0.1360
TRT	0.75ug/kg	10.0656	13.1591	408	0.76	0.4448
TRT	control	0
d		-7.0837	0.9054	408	-7.82	<.0001
T1		5.9708	1.3025	408	4.58	<.0001
d*TRT	0.075ug/k	-3.0411	1.2804	408	-2.38	0.0180
d*TRT	0.75ug/kg	-2.7623	1.2804	408	-2.16	0.0316
d*TRT	control	0
T1*TRT	0.075ug/k	3.0733	1.8421	408	1.67	0.0960
T1*TRT	0.75ug/kg	2.0600	1.8421	408	1.12	0.2641
T1*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	408	2.23	1.12	0.3276	0.3286
d	1	408	297.64	297.64	<.0001	<.0001
T1	1	408	104.35	104.35	<.0001	<.0001
d*TRT	2	408	6.90	3.45	0.0318	0.0328
T1*TRT	2	408	2.89	1.45	0.2356	0.2368





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1869.2078507	.	1.24E-13

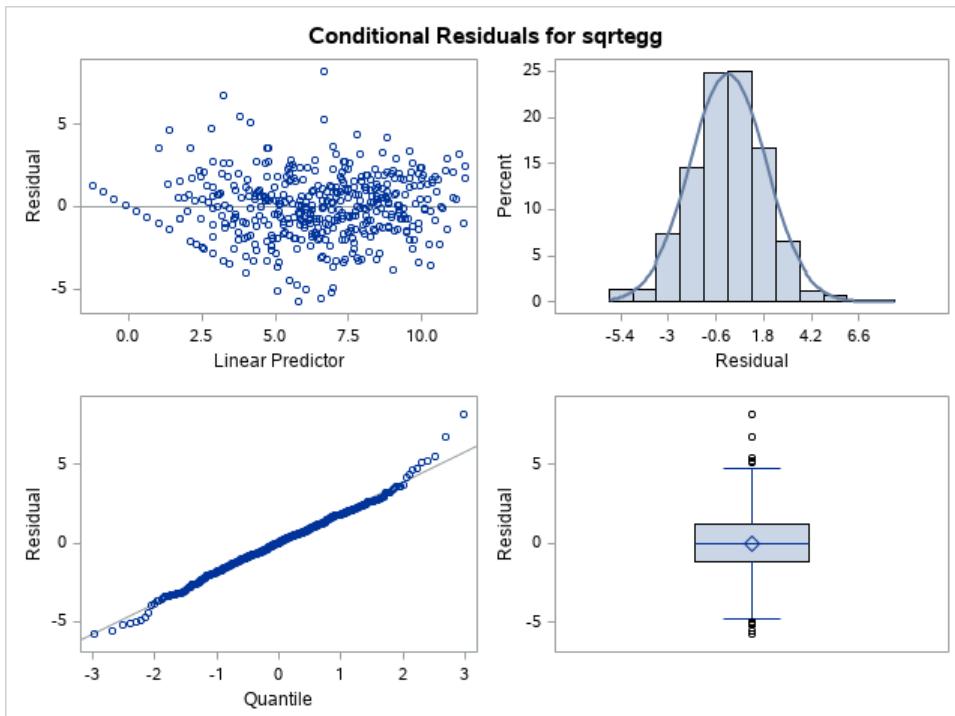
Convergence criterion (ABSGCONV=0.00001) satisfied.

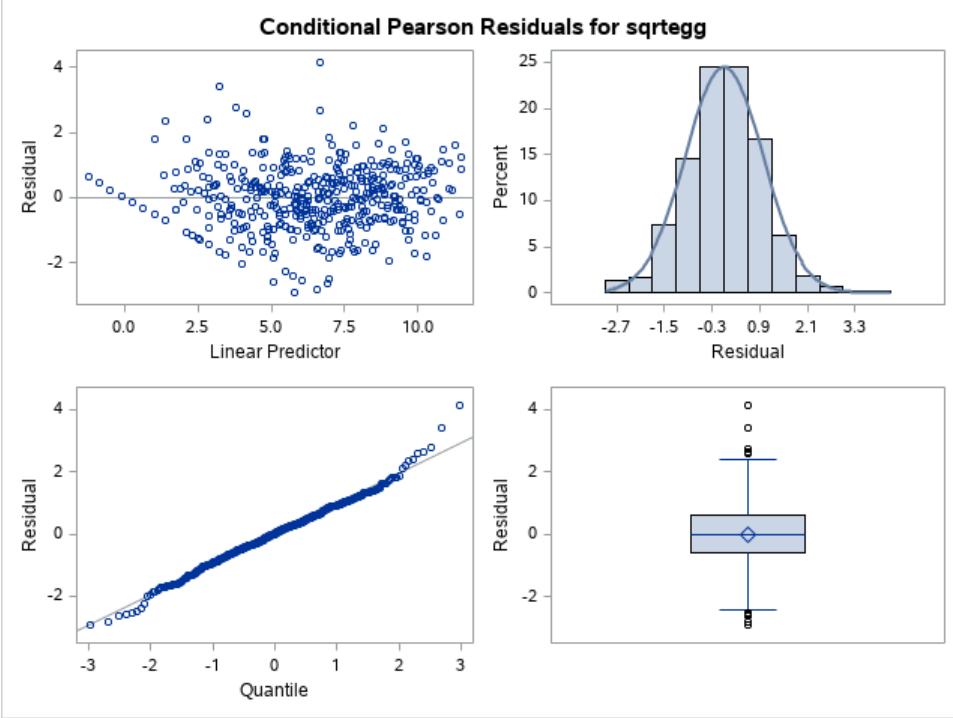
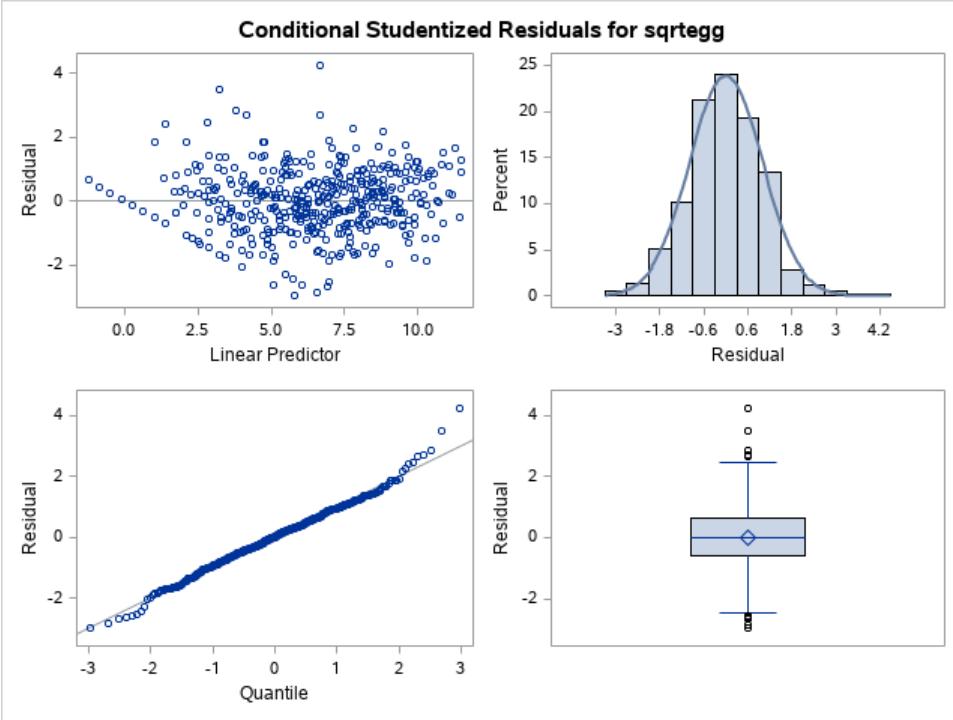
Fit Statistics	
-2 Res Log Likelihood	1869.21
AIC (smaller is better)	1873.21
AICC (smaller is better)	1873.24
BIC (smaller is better)	1874.99
CAIC (smaller is better)	1876.99
HQIC (smaller is better)	1873.45
Generalized Chi-Square	1666.77
Gener. Chi-Square / DF	3.91

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.8490	0.7348
Residual (VC)		3.9126	0.2729

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.7075	0.6511	15	14.91	<.0001
TRT	0.075ug/k	0.5390	0.9208	411	0.59	0.5586
TRT	0.75ug/kg	0.5100	0.9208	411	0.55	0.5800
TRT	control	0
d		-0.2005	0.02381	411	-8.42	<.0001
d*TRT	0.075ug/k	-0.08942	0.03368	411	-2.66	0.0082
d*TRT	0.75ug/kg	-0.1726	0.03368	411	-5.12	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.43	0.22	0.8051	0.8052
d	1	411	438.26	438.26	<.0001	<.0001
d*TRT	2	411	26.27	13.13	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information						
Class	Levels	Values				
t	24	1	2	3	4	5
TRT	3	0.075ug/k	0.75ug/kg	control		

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1869.2078507	.	5.99E-13

Convergence criterion (ABSGCONV=0.00001) satisfied.

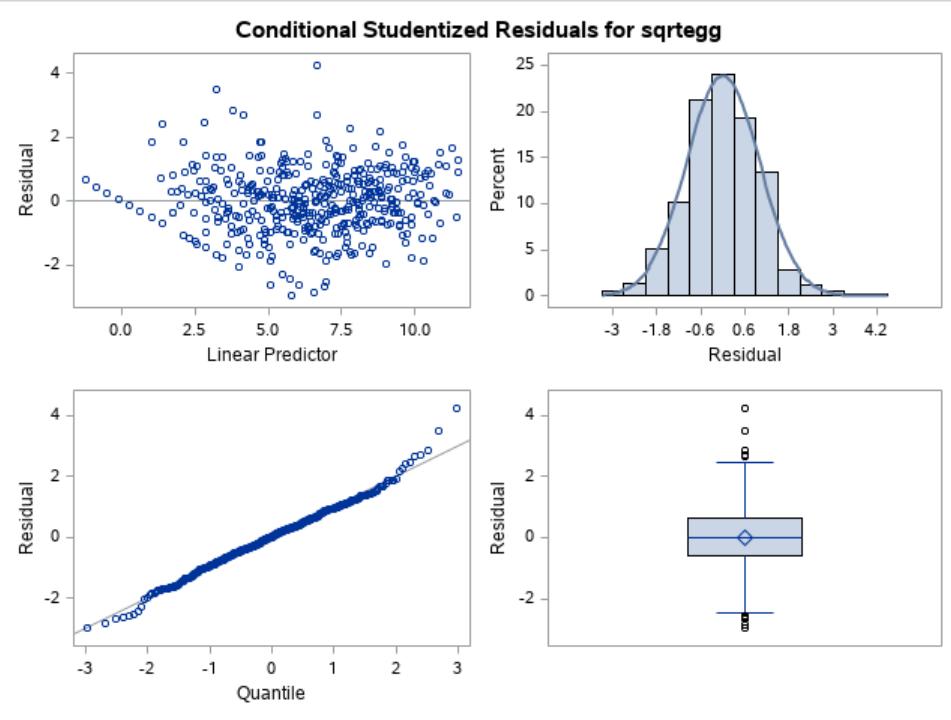
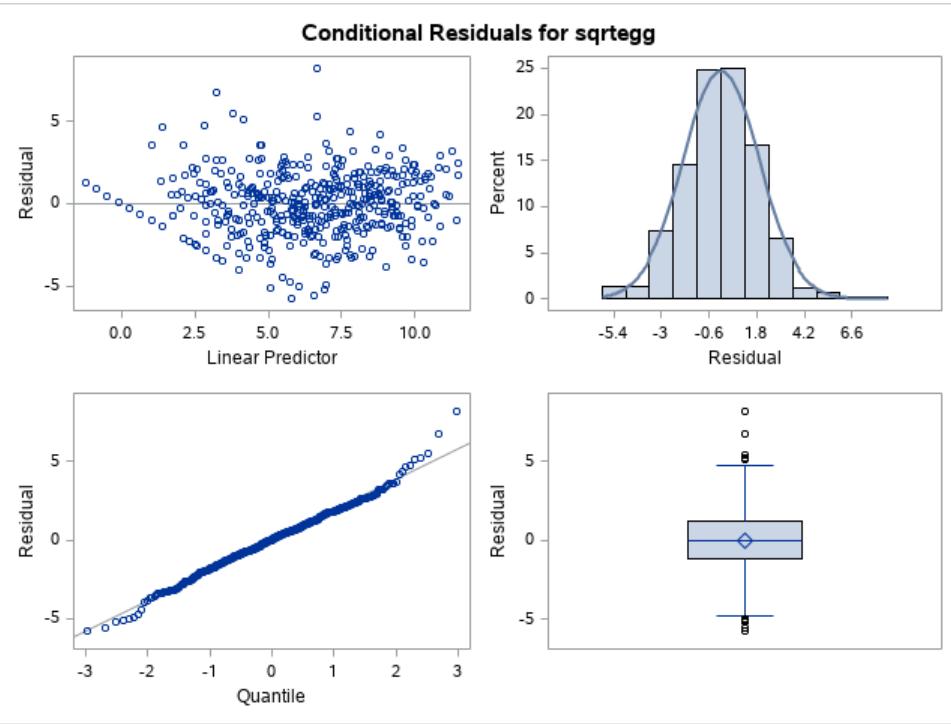
Fit Statistics	
-2 Res Log Likelihood	1869.21
AIC (smaller is better)	1875.21
AICC (smaller is better)	1875.26
BIC (smaller is better)	1877.88
CAIC (smaller is better)	1880.88
HQIC (smaller is better)	1875.58
Generalized Chi-Square	1666.77
Gener. Chi-Square / DF	3.91

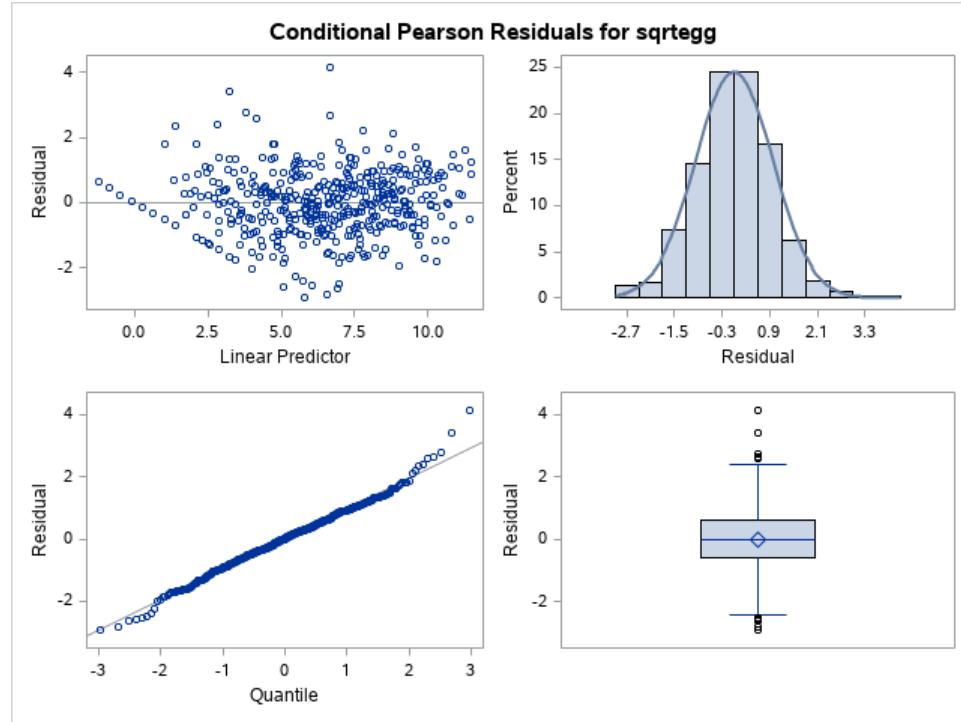
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.8490	0.7348
CS	TNK	0	.
Residual		3.9126	0.2729

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.7075	0.6511	15	14.91	<.0001
TRT	0.075ug/k	0.5390	0.9208	411	0.59	0.5586
TRT	0.75ug/kg	0.5100	0.9208	411	0.55	0.5800
TRT	control	0
d		-0.2005	0.02381	411	-8.42	<.0001
d*TRT	0.075ug/k	-0.08942	0.03368	411	-2.66	0.0082
d*TRT	0.75ug/kg	-0.1726	0.03368	411	-5.12	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F

TRT	2	411	0.43	0.22	0.8051	0.8052
d	1	411	438.26	438.26	<.0001	<.0001
d*TRT	2	411	26.27	13.13	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	2
Upper Boundaries	1
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History						
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient	
0	0	4	1960.8926002		340.0483	
1	0	2	1855.6971653	105.19543499	59.04554	
2	0	2	1853.4118425	2.28532276	16.36926	
3	0	2	1853.2267687	0.18507383	0.258862	
4	0	2	1853.2266178	0.00015082	0.017303	
5	0	2	1853.2266153	0.00000260	0.002101	

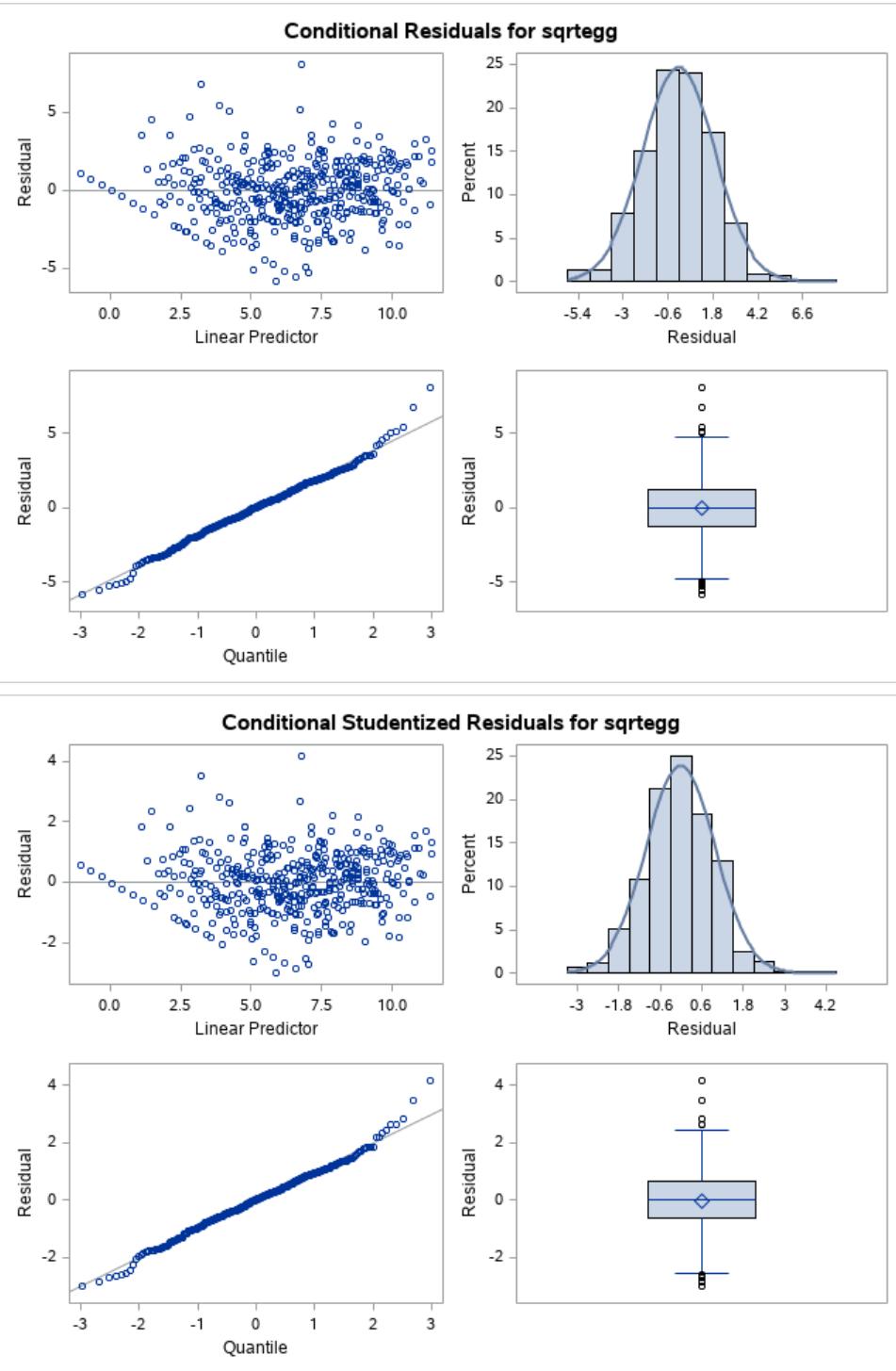
Convergence criterion (GCONV=1E-8) satisfied.

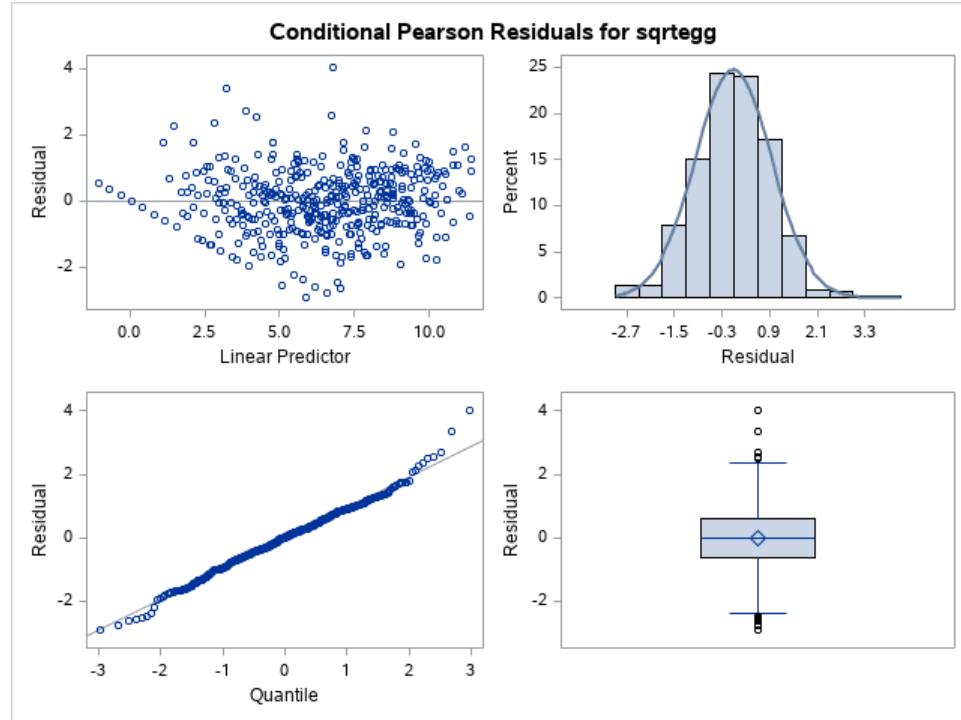
Fit Statistics	
-2 Res Log Likelihood	1853.23
AIC (smaller is better)	1859.23
AICC (smaller is better)	1859.28
BIC (smaller is better)	1861.90
CAIC (smaller is better)	1864.90
HQIC (smaller is better)	1859.59
Generalized Chi-Square	1712.85
Gener. Chi-Square / DF	4.02

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.7587	0.7349
AR(1)	TNK	0.2106	0.05293
Residual		4.0208	0.3033

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.7355	0.6825	15	14.27	<.0001
TRT	0.075ug/k	0.5327	0.9651	411	0.55	0.5813
TRT	0.75ug/kg	0.4886	0.9651	411	0.51	0.6129
TRT	control	0
d		-0.2001	0.02893	411	-6.92	<.0001
d*TRT	0.075ug/k	-0.08728	0.04091	411	-2.13	0.0335
d*TRT	0.75ug/kg	-0.1718	0.04091	411	-4.20	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.38	0.19	0.8289	0.8289
d	1	411	294.24	294.24	<.0001	<.0001
d*TRT	2	411	17.63	8.82	0.0001	0.0002





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	eggs_gfem
Response Distribution	Poisson
Link Function	Log
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	4	642.82937772	0.63016860	0.002174
1	0	5	818.6550228	0.15126150	0.000102
2	0	3	850.0774318	0.04673637	0.000823
3	0	2	850.74524551	0.00115958	0.000035
4	0	1	850.73825295	0.00000794	6.397E-6
5	0	1	850.73831578	0.00000017	0.000154
6	0	1	850.73831447	0.00000023	0.000209
7	0	1	850.73831625	0.00000031	0.000283
8	0	1	850.73831383	0.00000042	0.000385
9	0	1	850.73831712	0.00000057	0.000522
10	0	1	850.73831266	0.00000078	0.000709
11	0	1	850.73831871	0.00000100	0.000879
12	0	1	850.7383109	0.00000131	0.001195
13	0	1	850.7383211	0.00000100	0.000386
14	0	1	850.73831329	0.00000059	0.000536
15	0	1	850.73831786	0.00000079	0.000727
16	0	1	850.73831165	0.00000108	0.000987
17	0	1	850.73832008	0.00000100	0.000597
18	0	1	850.73831227	0.00000089	0.000817
19	0	1	850.73831924	0.00000100	0.00077

Did not converge.

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.1017	.
Residual (VC)		14.8507	.

The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	2
Upper Boundaries	1
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History						
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient	
0	0	4	1960.8926002		340.0483	
1	0	2	1855.6971653	105.19543499	59.04554	
2	0	2	1853.4118425	2.28532276	16.36926	
3	0	2	1853.2267687	0.18507383	0.258862	
4	0	2	1853.2266178	0.00015082	0.017303	
5	0	2	1853.2266153	0.00000260	0.002101	

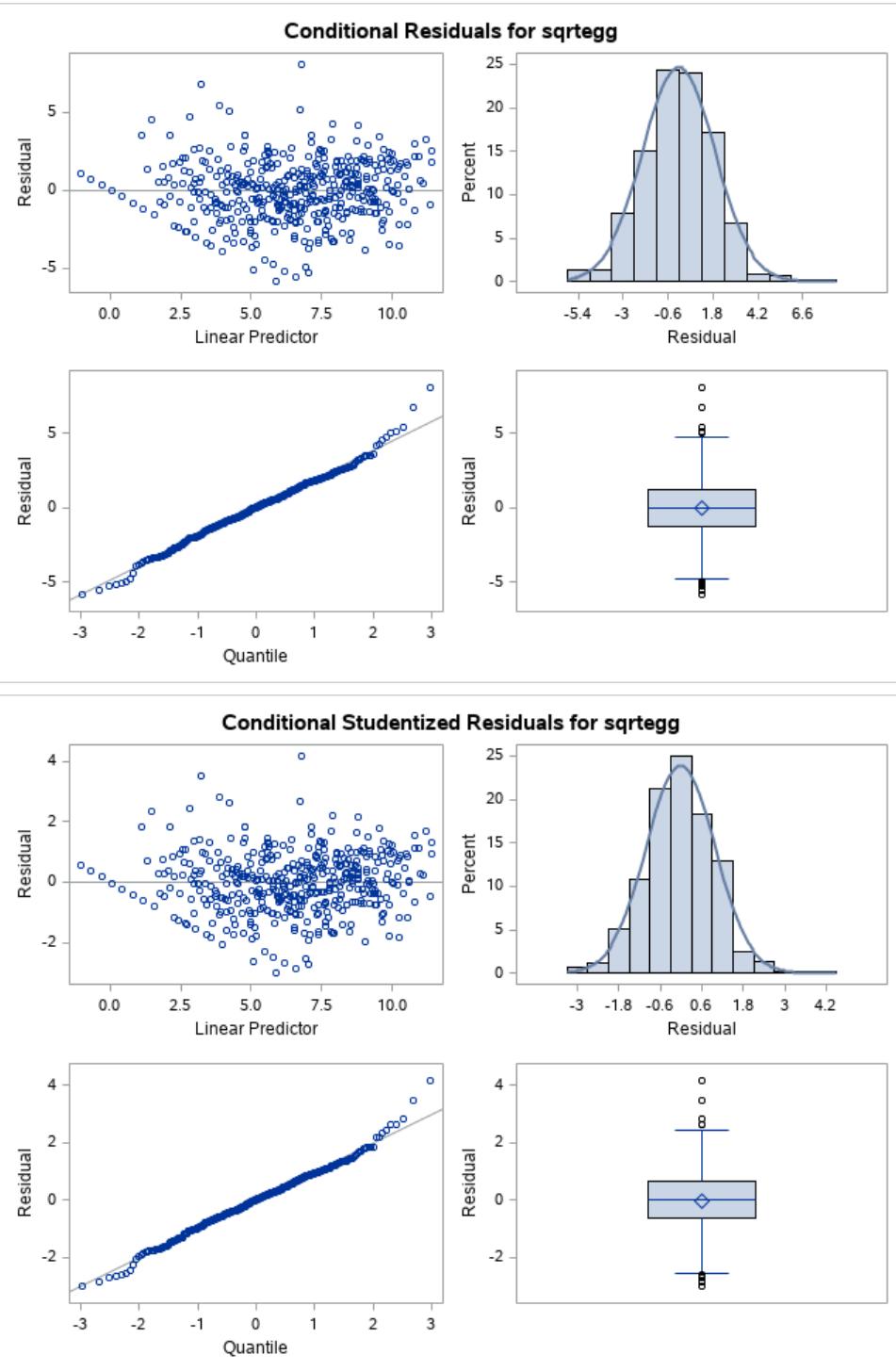
Convergence criterion (GCONV=1E-8) satisfied.

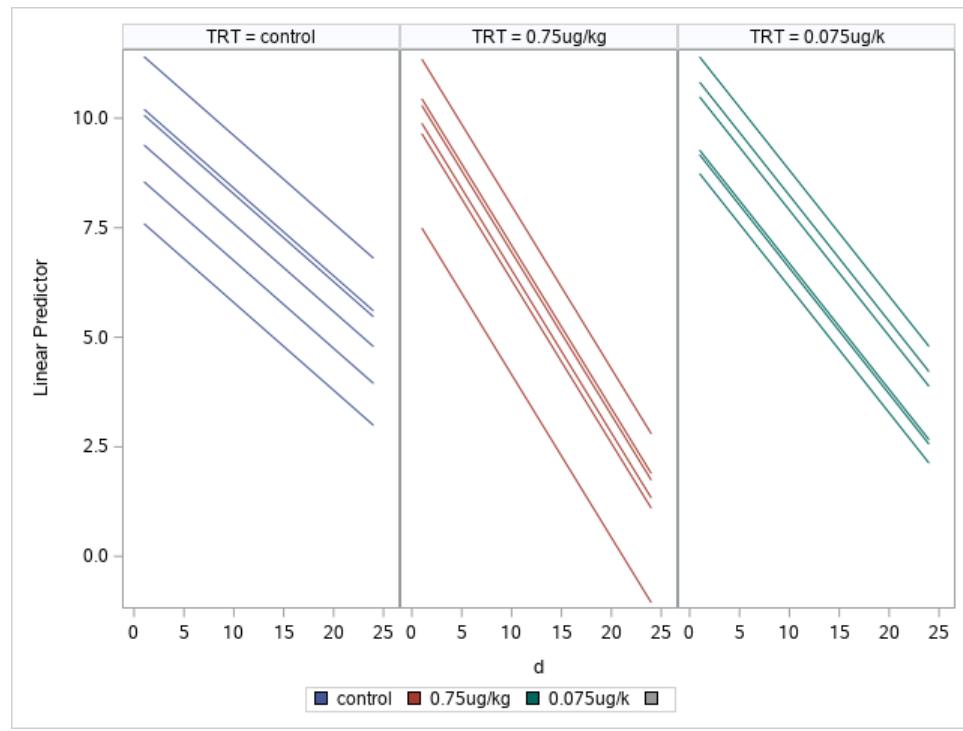
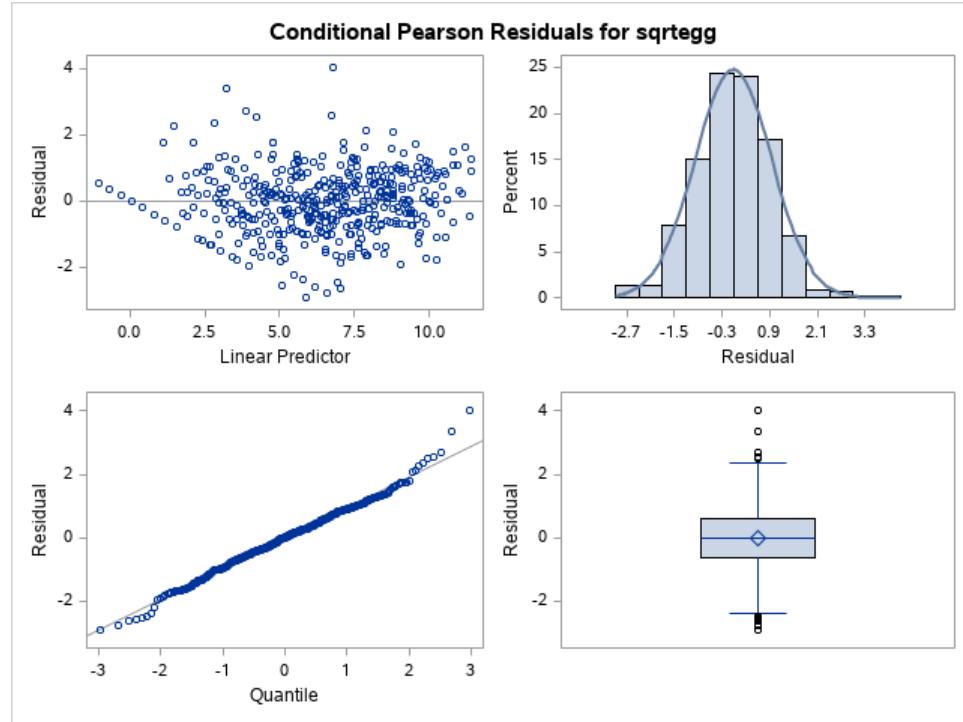
Fit Statistics	
-2 Res Log Likelihood	1853.23
AIC (smaller is better)	1859.23
AICC (smaller is better)	1859.28
BIC (smaller is better)	1861.90
CAIC (smaller is better)	1864.90
HQIC (smaller is better)	1859.59
Generalized Chi-Square	1712.85
Gener. Chi-Square / DF	4.02

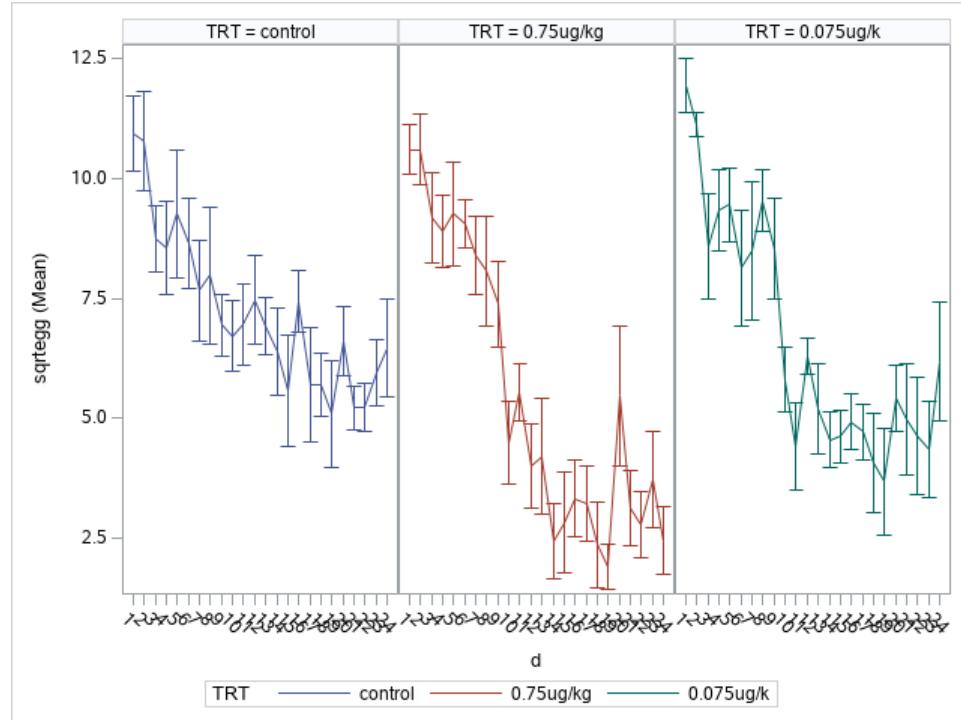
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.7587	0.7349
AR(1)	TNK	0.2106	0.05293
Residual		4.0208	0.3033

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.7355	0.6825	15	14.27	<.0001
TRT	0.075ug/k	0.5327	0.9651	411	0.55	0.5813
TRT	0.75ug/kg	0.4886	0.9651	411	0.51	0.6129
TRT	control	0
d		-0.2001	0.02893	411	-6.92	<.0001
d*TRT	0.075ug/k	-0.08728	0.04091	411	-2.13	0.0335
d*TRT	0.75ug/kg	-0.1718	0.04091	411	-4.20	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.38	0.19	0.8289	0.8289
d	1	411	294.24	294.24	<.0001	<.0001
d*TRT	2	411	17.63	8.82	0.0001	0.0002







The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLE
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	4	1.340781E154	1.93923196	500.3275
1	0	0	1285.6665306	.	763.8009

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
2	0	5	1264.72434	2.0000000	0.000136
3	0	7	1352.8037149	0.50123290	0.000053
4	0	5	1379.7489416	0.92773469	7.942E-6
5	0	2	1385.4477806	1.30238724	0.000384
6	0	2	1385.8915169	0.45284660	3.528E-8
7	0	1	1385.8906356	0.00007613	5.095E-9
8	0	1	1385.890661	0.00000203	1.47E-10
9	0	0	1385.8906606	0.00000000	5.336E-7

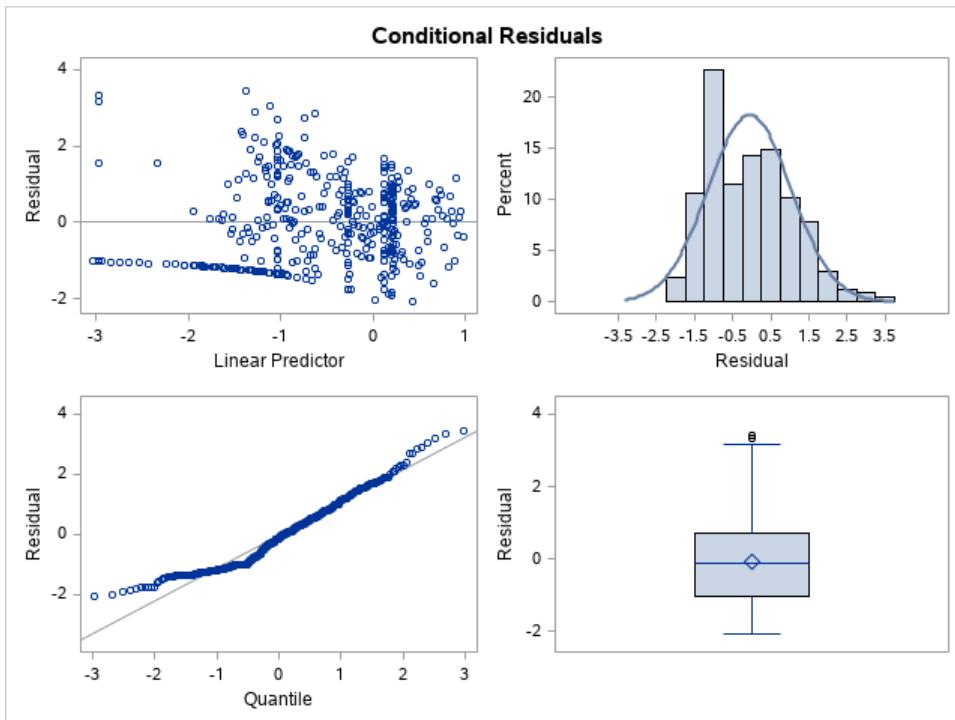
Convergence criterion (PCONV=1.11022E-8) satisfied.

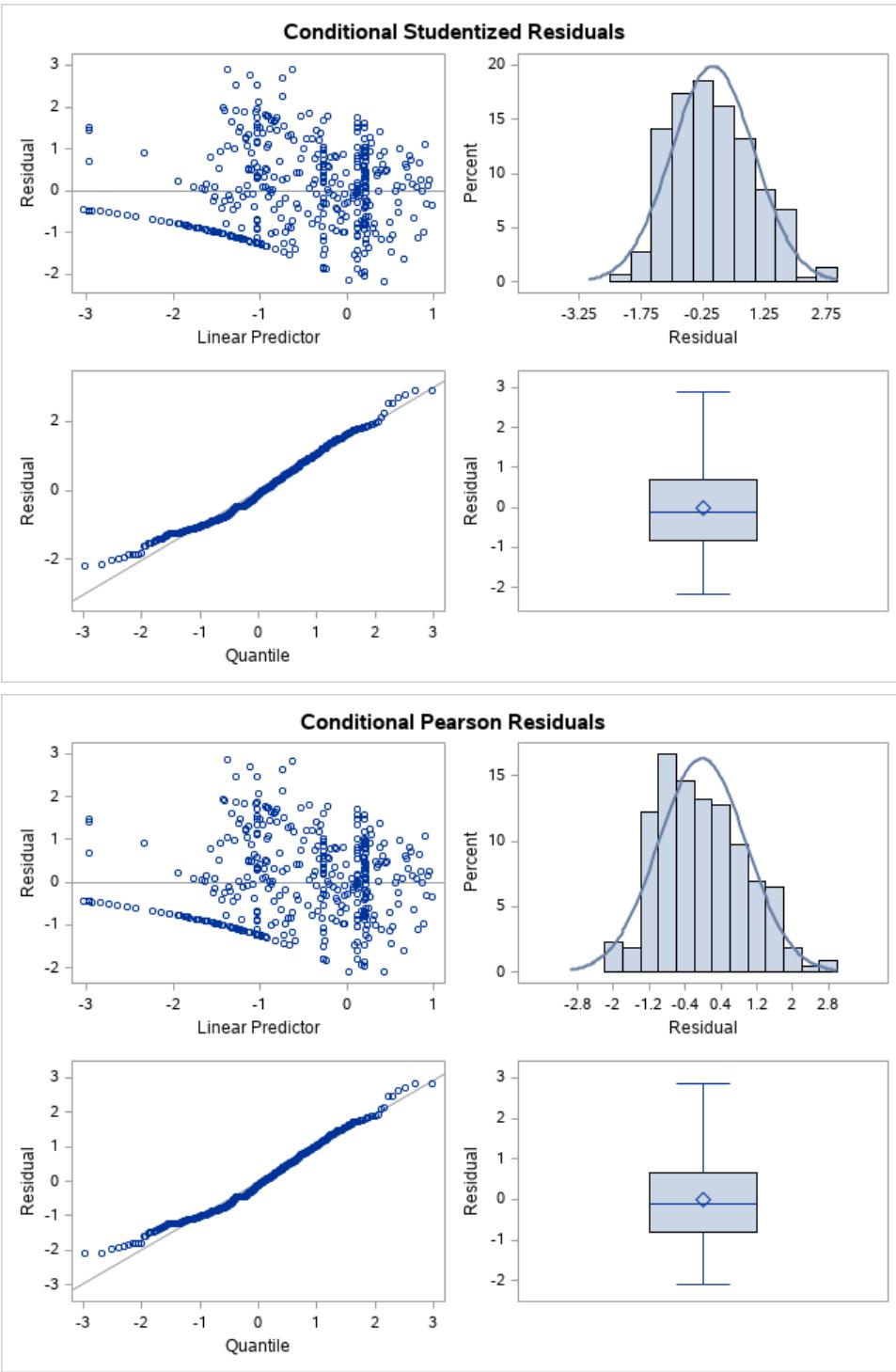
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1385.89
Generalized Chi-Square	99.89
Gener. Chi-Square / DF	0.23

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.8697	0.3617
t	TNK	0.2345	.
Scale		0.000544	0.06998

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-0.6177	0.4264	15	-1.45	0.1680
TRT	0.075ug/k	0.4622	0.5992	411	0.77	0.4409
TRT	0.75ug/kg	0.9309	0.5993	411	1.55	0.1211
TRT	control	0
d		-0.00003	0.01288	411	-0.00	0.9981
d*TRT	0.075ug/k	-0.01795	0.01806	411	-0.99	0.3208
d*TRT	0.75ug/kg	-0.09975	0.01917	411	-5.20	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	2.41	1.21	0.2992	0.3002
d	1	411	26.28	26.28	<.0001	<.0001
d*TRT	2	411	29.97	14.99	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	0	1.340781E154	2.0000000	2787.94
1	0	0	1348.2751479	.	3112.067
2	0	5	1262.6153901	1.93594970	0.000115
3	0	7	1356.4821217	2.0000000	0.000061
4	0	5	1386.4249146	1.87329168	8.466E-6
5	0	4	1392.3492766	1.65861660	0.00225
6	0	2	1392.7749806	1.13818253	0.000155
7	0	1	1392.7764626	0.00712333	3.373E-7
8	0	1	1392.7766884	0.00136103	1.43E-9
9	0	0	1392.7766854	0.0000000	4.784E-6

Convergence criterion (PCONV=1.11022E-8) satisfied.

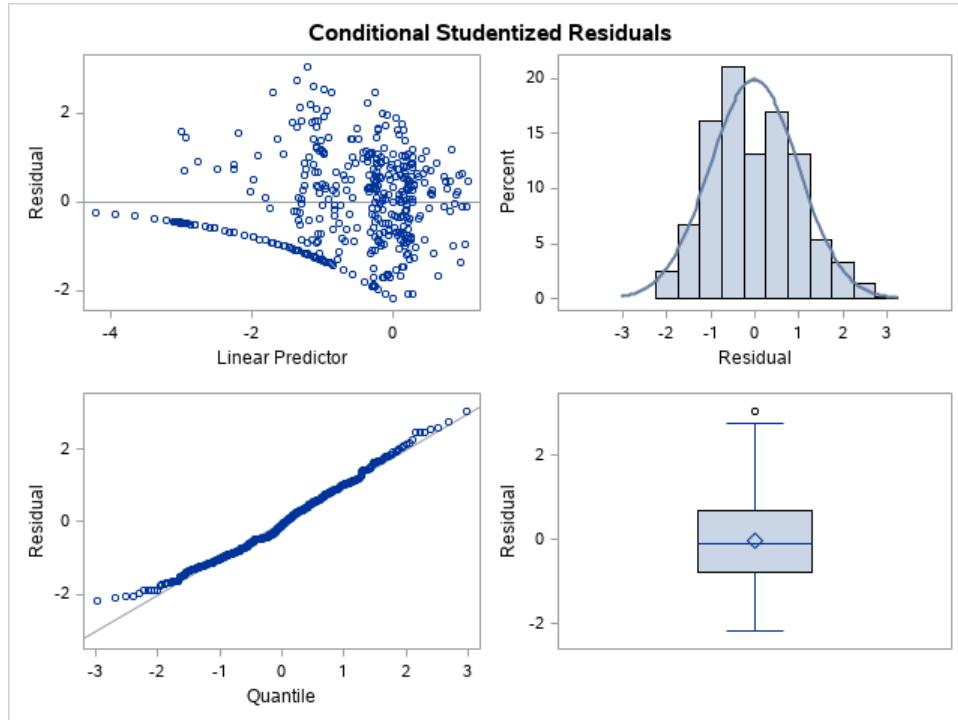
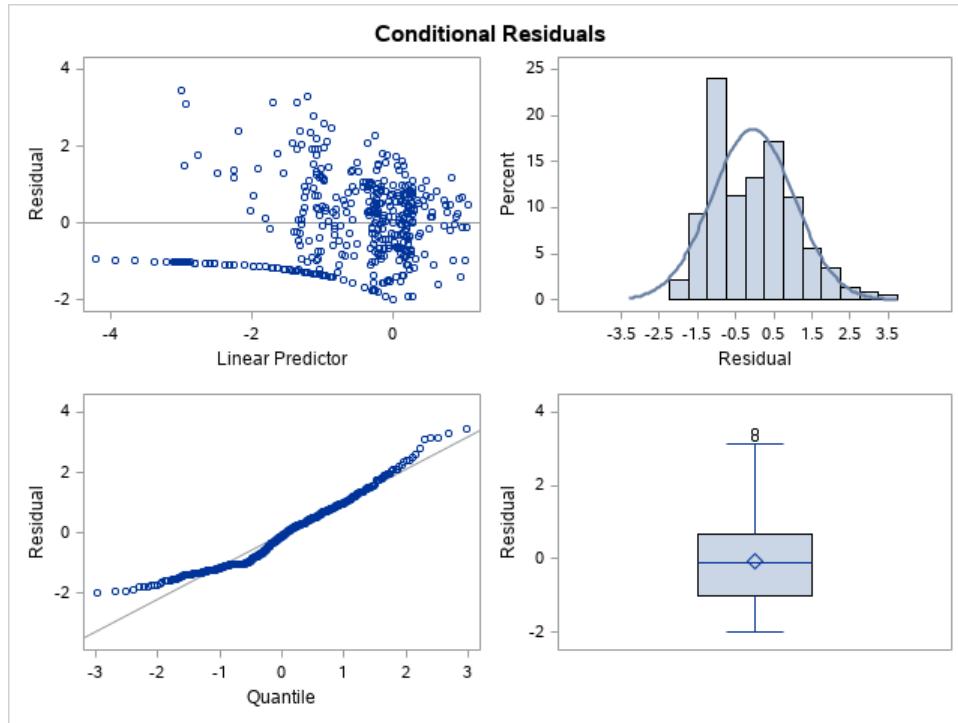
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1392.78
Generalized Chi-Square	94.72
Gener. Chi-Square / DF	0.22

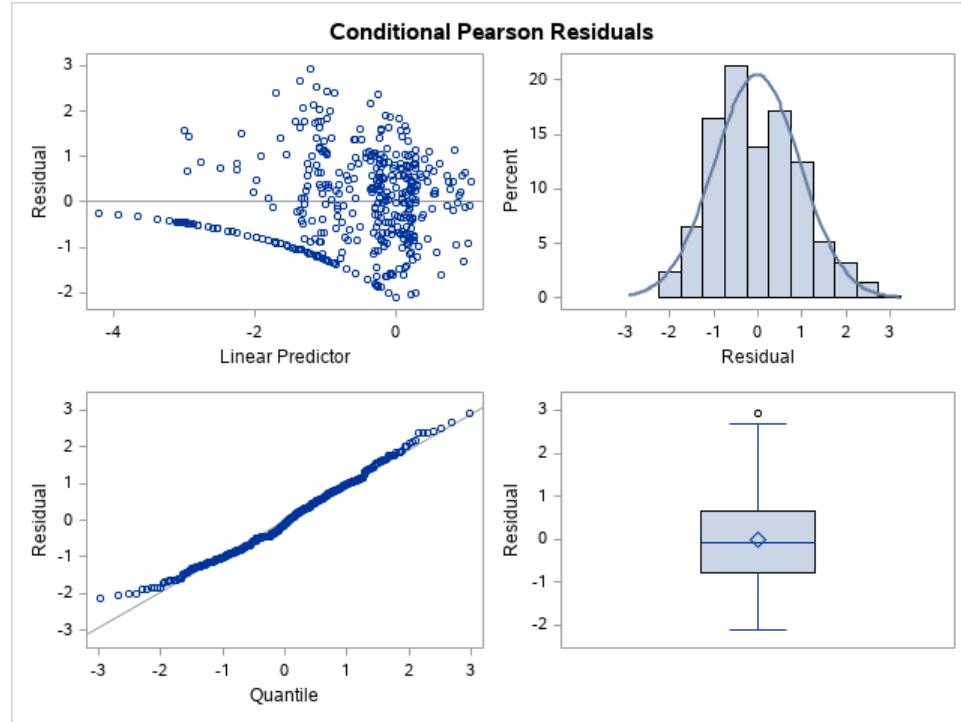
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.8847	0.3662
t	TNK	0.2239	.
Scale		7.197E-6	0.07020

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-0.5464	0.4508	15	-1.21	0.2443
TRT	0.075ug/k	0.08596	0.6339	408	0.14	0.8922
TRT	0.75ug/kg	0.3131	0.6308	408	0.50	0.6199
TRT	control	0
d		-0.01104	0.02442	408	-0.45	0.6516
T2		0.02706	0.05147	408	0.53	0.5993
d*TRT	0.075ug/k	0.03749	0.03418	408	1.10	0.2733
d*TRT	0.75ug/kg	-0.00455	0.03407	408	-0.13	0.8938
d*TRT	control	0
T2*TRT	0.075ug/k	-0.1380	0.07252	408	-1.90	0.0577
T2*TRT	0.75ug/kg	-0.2917	0.08189	408	-3.56	0.0004
T2*TRT	control	0

Type III Tests of Fixed Effects

Effect	Num DF	Den DF	Total Squared Effect	Pr > ChiSq	Pr > F	
TRT	2	408	0.26	0.13	0.8760	0.8760
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
T2	1	408	13.04	13.04	0.0003	0.0003
d*TRT	2	408	1.86	0.93	0.3948	0.3956
T2*TRT	2	408	12.81	6.40	0.0017	0.0018





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	6	1197.8864249	2.0000000	89.85523

Iteration History						
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient	
1	0	0	1351.8350083	1.28209329	101.0528	
2	0	0	1318.0996797	.	46.44719	
3	0	12	1309.6211193	2.0000000	6.612E-7	
4	0	5	1262.8265985	1.02334741	2.571E-6	
5	0	4	1276.5350091	0.79734812	1.727E-7	
6	0	3	1275.4741271	1.96060978	0.00014	
7	0	4	1276.0569626	0.33479491	4.57E-6	
8	0	3	1277.3077064	1.99974863	0.14607	
9	0	4	1277.5902017	1.99699243	0.000087	
10	0	3	1277.4301661	1.97697519	0.025288	
11	0	3	1277.5713827	1.93889360	0.00006	
12	0	3	1277.5216377	1.77220457	0.015221	
13	0	2	1277.5755194	1.11716061	0.000056	
14	0	1	1277.5213893	1.91254452	0.005921	
15	0	1	1277.5495909	1.56450572	0.000556	
16	0	1	1277.5152963	0.28654763	0.00165	
17	0	1	1277.5286318	0.11471183	0.000045	
18	0	1	1277.5158077	0.97212040	0.00005	
19	0	1	1277.5171908	0.26949944	2.179E-6	
20	0	1	1277.5159204	0.68534850	0.000601	
21	0	1	1277.5181375	1.62803610	0.000151	
22	0	1	1277.51562	0.17594511	0.000029	
23	0	1	1277.5154725	1.31848234	1.961E-7	
24	0	1	1277.5150987	0.73915120	1.857E-7	
25	0	1	1277.5149206	0.73379661	1.131E-7	
26	0	1	1277.5149129	0.43501173	8.707E-8	
27	0	1	1277.5148102	0.35750442	5.467E-8	
28	0	1	1277.5148415	0.22021017	3.939E-8	
29	0	1	1277.5147933	0.16423302	2.527E-8	
30	0	1	1277.5148149	0.10414557	1.76E-8	
31	0	1	1277.5147935	0.07392179	1.146E-8	
32	0	1	1277.5148049	0.04767498	7.834E-9	
33	0	0	1277.5147955	0.00000011	8.448E-6	
34	0	1	1277.5147828	0.03645502	3.569E-9	
35	0	1	1277.5148014	0.02116891	9.87E-10	
36	0	0	1277.5147949	0.00823530	8.504E-9	
37	0	0	1277.5147986	0.00000000	6.958E-6	

Convergence criterion (PCONV=1.11022E-8) satisfied.

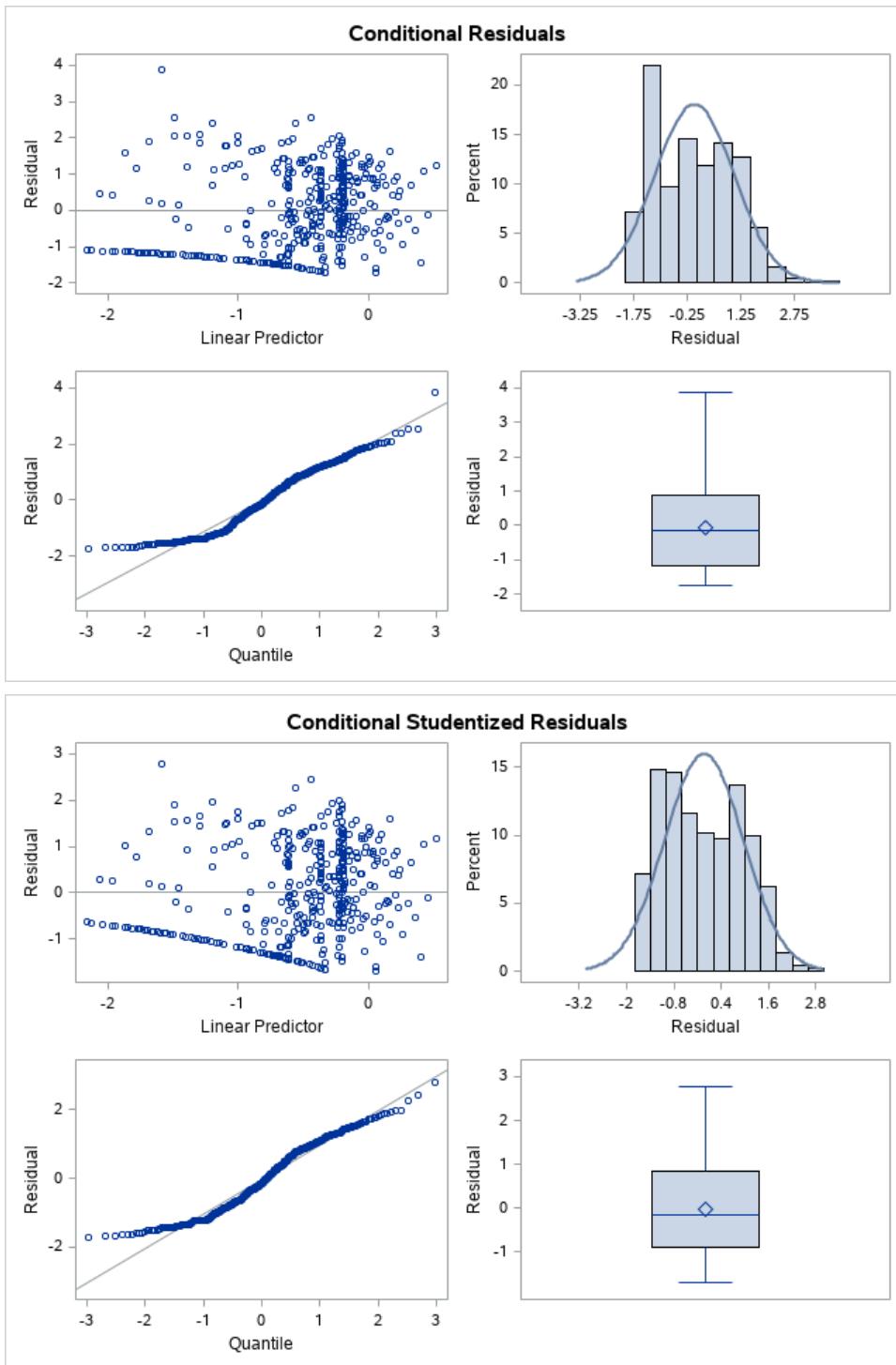
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1277.51
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

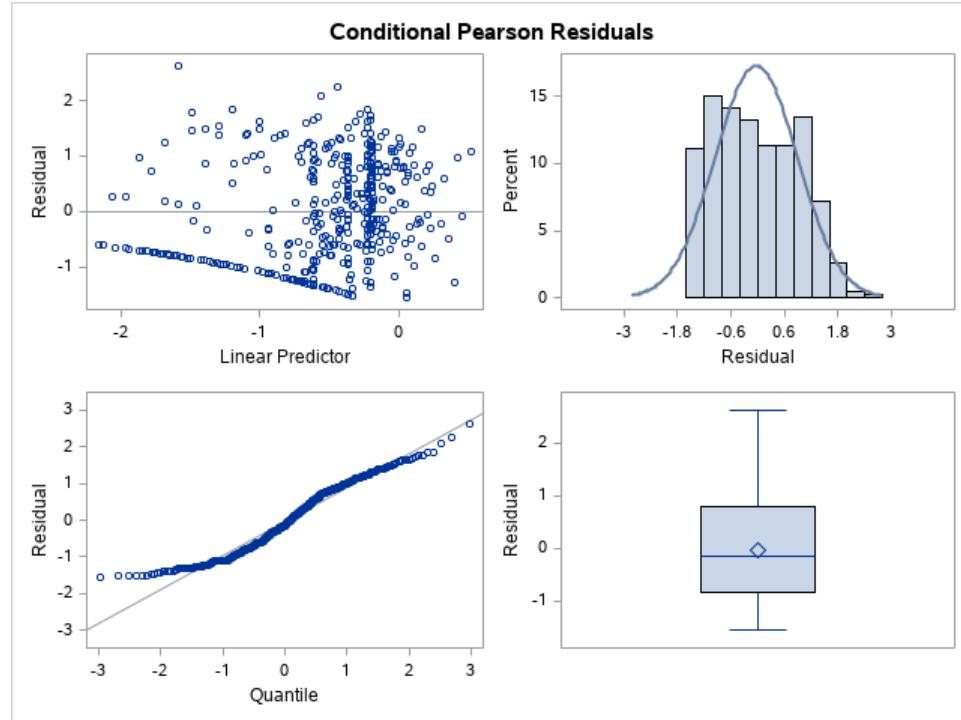
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.2050	0.3256
Variance	TNK	0.2133	0.01494
CS	TNK	0.09344	0.07319
Scale		1.041E-7	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-0.4255	0.3567	15	-1.19	0.2514
TRT	0.075ug/k	0.2923	0.5004	411	0.58	0.5595
TRT	0.75ug/kg	0.8077	0.4892	411	1.65	0.0995
TRT	control	0
d		-0.00003	0.01146	411	-0.00	0.9980
d*TRT	0.075ug/k	-0.01642	0.01616	411	-1.02	0.3099
d*TRT	0.75ug/kg	-0.09596	0.01804	411	-5.32	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	2.83	1.41	0.2430	0.2442

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
d	1	411	27.79	27.79	<.0001	<.0001
d*TRT	2	411	30.69	15.35	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	4
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	8	1139.4915757	2.0000000	7.786E-8

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	5	1260.7604916	0.95680232	0.000035
2	0	4	1304.3688375	1.92391504	0.000016
3	0	2	1309.4570106	0.78286584	0.000036
4	0	1	1309.3920142	0.01010375	0.00002
5	0	1	1309.3915799	0.00000042	8.978E-9
6	0	1	1309.3915664	0.00000015	4.363E-6
7	0	0	1309.3915667	0.00000000	3.938E-6

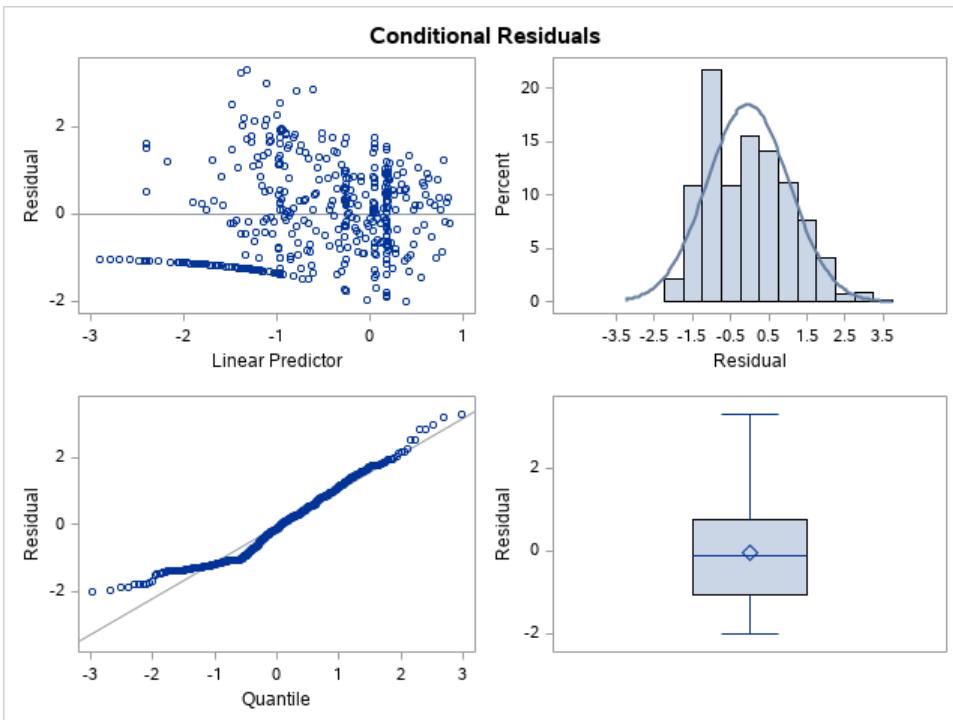
Convergence criterion (PCONV=1.11022E-8) satisfied.

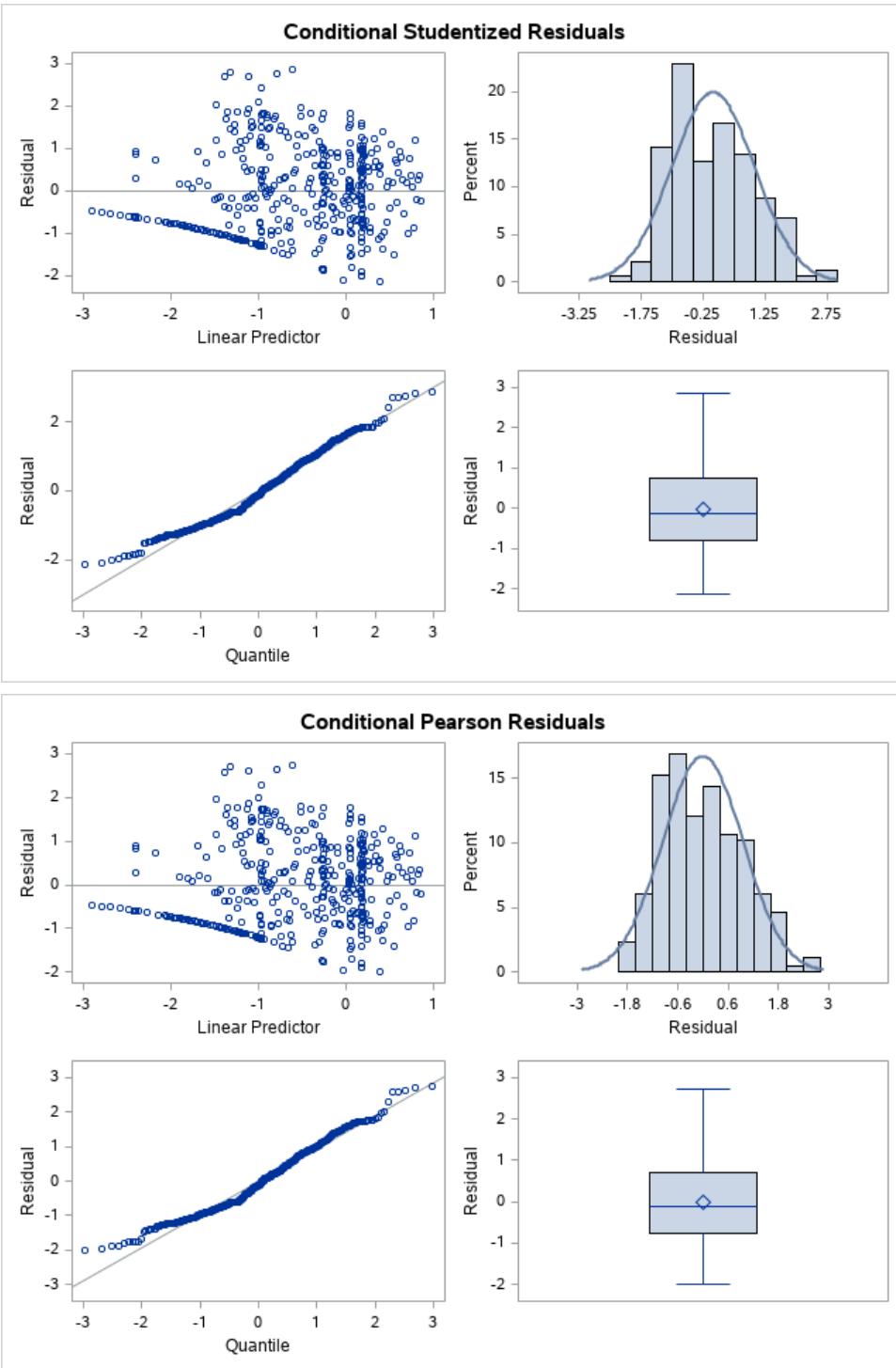
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1309.39
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.6859	0.3192
Variance	TNK	0.2484	.
AR(1)	TNK	0.3871	0.05101
Scale		0.003489	0.08820

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-0.5275	0.4313	15	-1.22	0.2401
TRT	0.075ug/k	0.3348	0.6059	411	0.55	0.5809
TRT	0.75ug/kg	0.8819	0.6062	411	1.45	0.1465
TRT	control	0
d		-0.00096	0.01816	411	-0.05	0.9580
d*TRT	0.075ug/k	-0.01642	0.02559	411	-0.64	0.5215
d*TRT	0.75ug/kg	-0.1028	0.02748	411	-3.74	0.0002
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	2.16	1.08	0.3393	0.3403
d	1	411	13.80	13.80	0.0002	0.0002
d*TRT	2	411	15.58	7.79	0.0004	0.0005





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	4	1.340781E154	1.93923196	500.3275
1	0	0	1285.6665306	.	763.8009
2	0	5	1264.72434	2.00000000	0.000136
3	0	7	1352.8037149	0.50123290	0.000053
4	0	5	1379.7489416	0.92773469	7.942E-6
5	0	2	1385.4477806	1.30238724	0.000384
6	0	2	1385.8915169	0.45284660	3.528E-8
7	0	1	1385.8906356	0.00007613	5.095E-9
8	0	1	1385.890661	0.00000203	1.47E-10
9	0	0	1385.8906606	0.00000000	5.336E-7

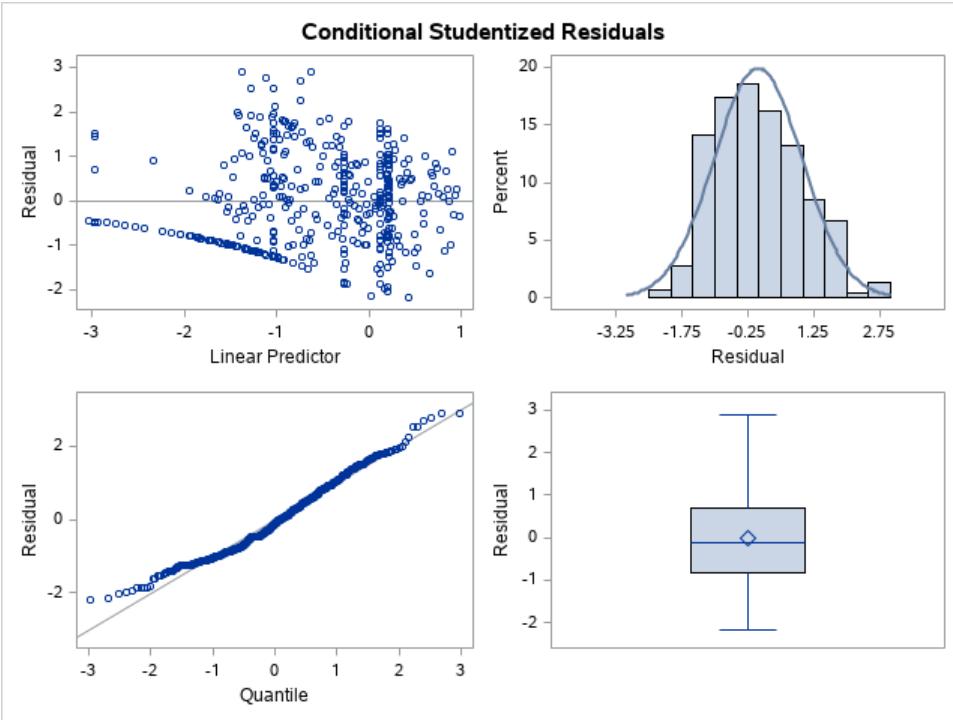
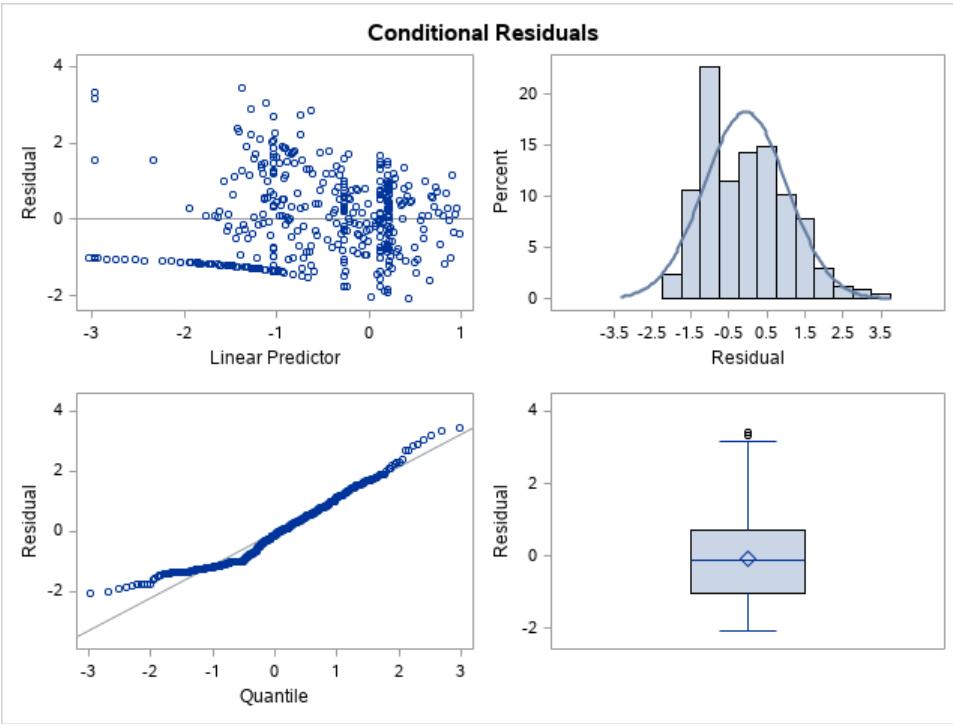
Convergence criterion (PCONV=1.11022E-8) satisfied.

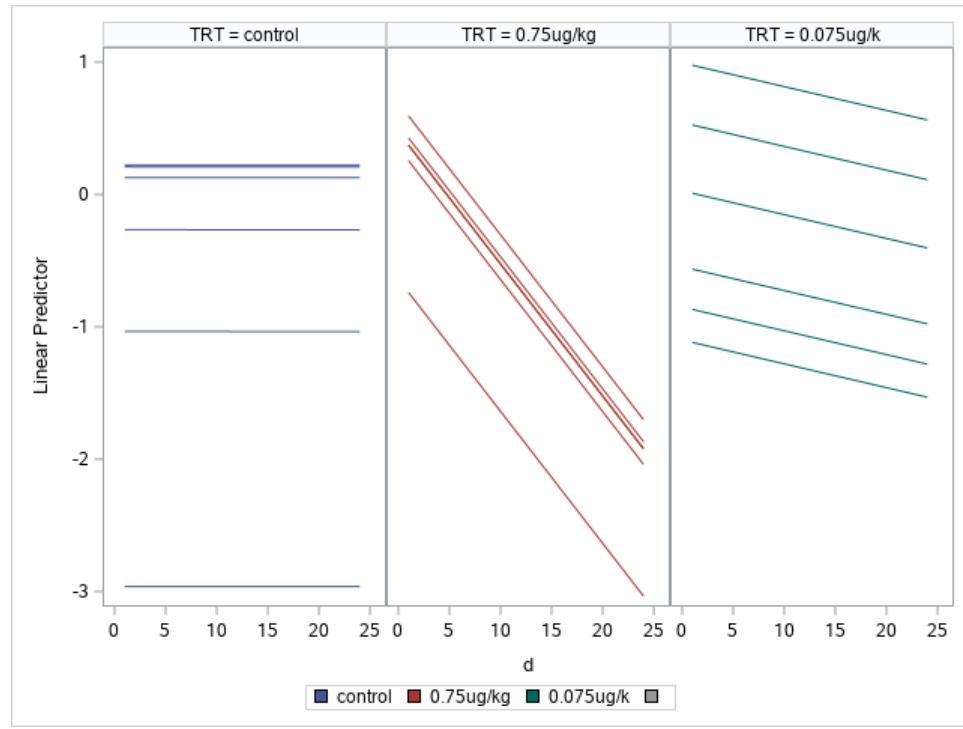
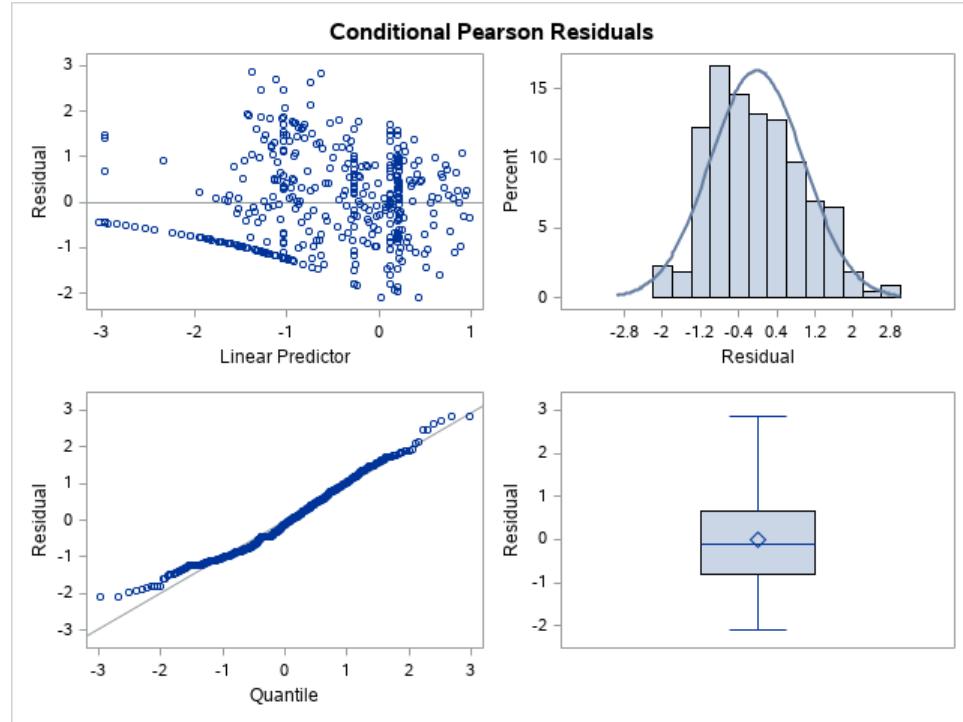
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1385.89
Generalized Chi-Square	99.89
Gener. Chi-Square / DF	0.23

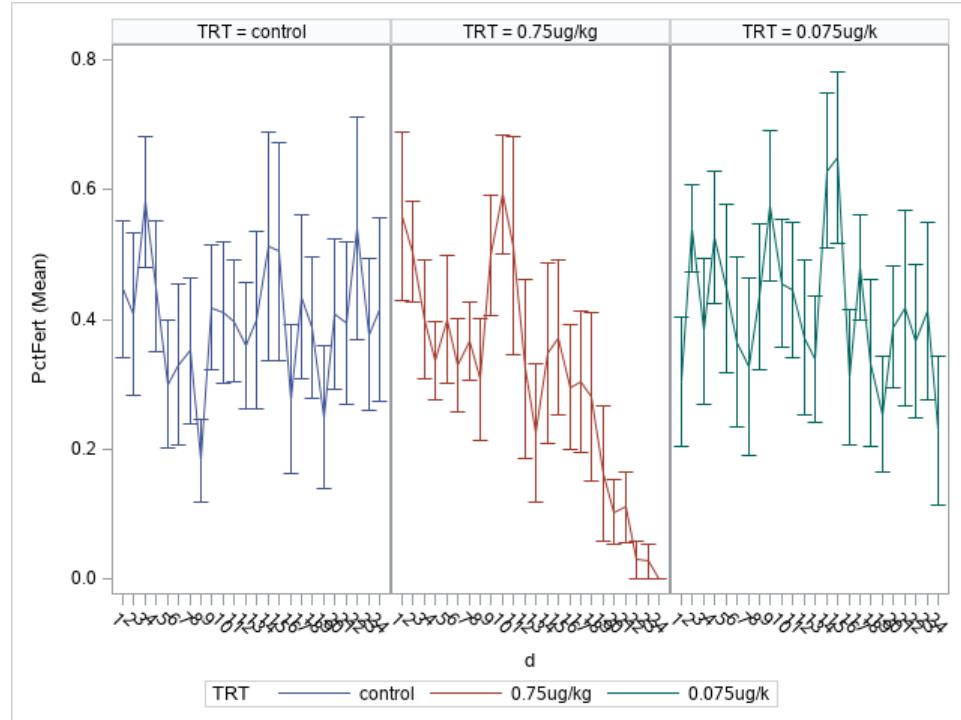
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.8697	0.3617
t	TNK	0.2345	.
Scale		0.000544	0.06998

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-0.6177	0.4264	15	-1.45	0.1680
TRT	0.075ug/k	0.4622	0.5992	411	0.77	0.4409
TRT	0.75ug/kg	0.9309	0.5993	411	1.55	0.1211
TRT	control	0
d		-0.00003	0.01288	411	-0.00	0.9981
d*TRT	0.075ug/k	-0.01795	0.01806	411	-0.99	0.3208
d*TRT	0.75ug/kg	-0.09975	0.01917	411	-5.20	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	2.41	1.21	0.2992	0.3002
d	1	411	26.28	26.28	<.0001	<.0001
d*TRT	2	411	29.97	14.99	<.0001	<.0001







The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	9	972.69638241	2.0000000	0.000077
1	0	7	1177.1742232	0.79275084	0.000221

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
2	0	4	1257.3353091	0.21323811	0.003767
3	0	6	1271.2869711	0.01869766	0.000633
4	0	3	1271.7981327	0.00043908	1.306E-6
5	0	2	1271.793078	0.00000406	7.942E-6
6	0	1	1271.7931359	0.00000005	8.088E-6
7	0	0	1271.793135	0.00000000	8.082E-6

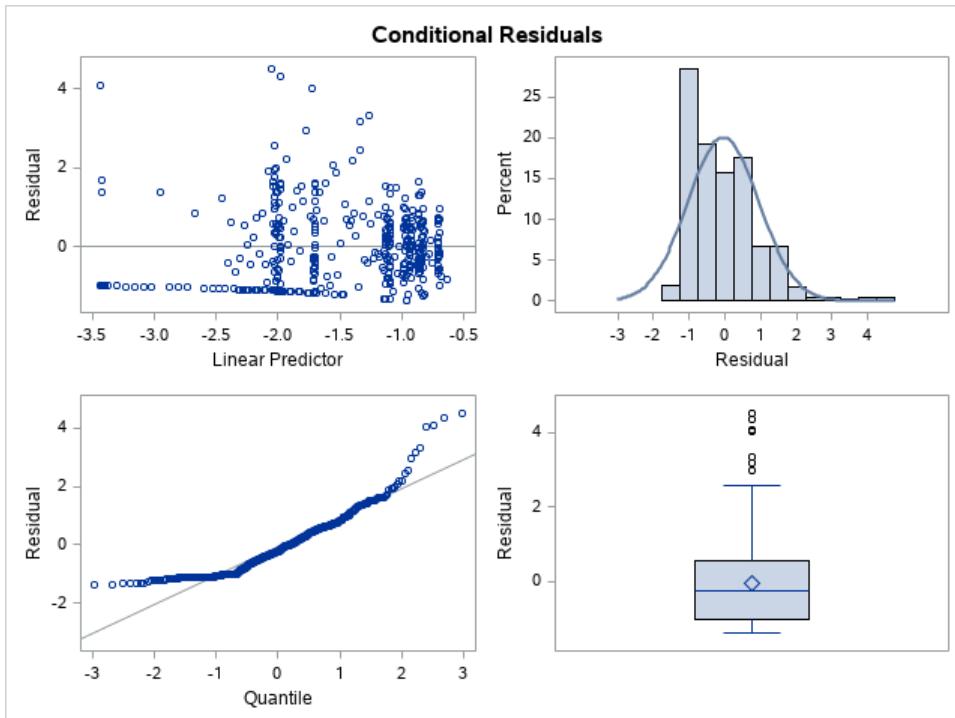
Convergence criterion (PCONV=1.11022E-8) satisfied.

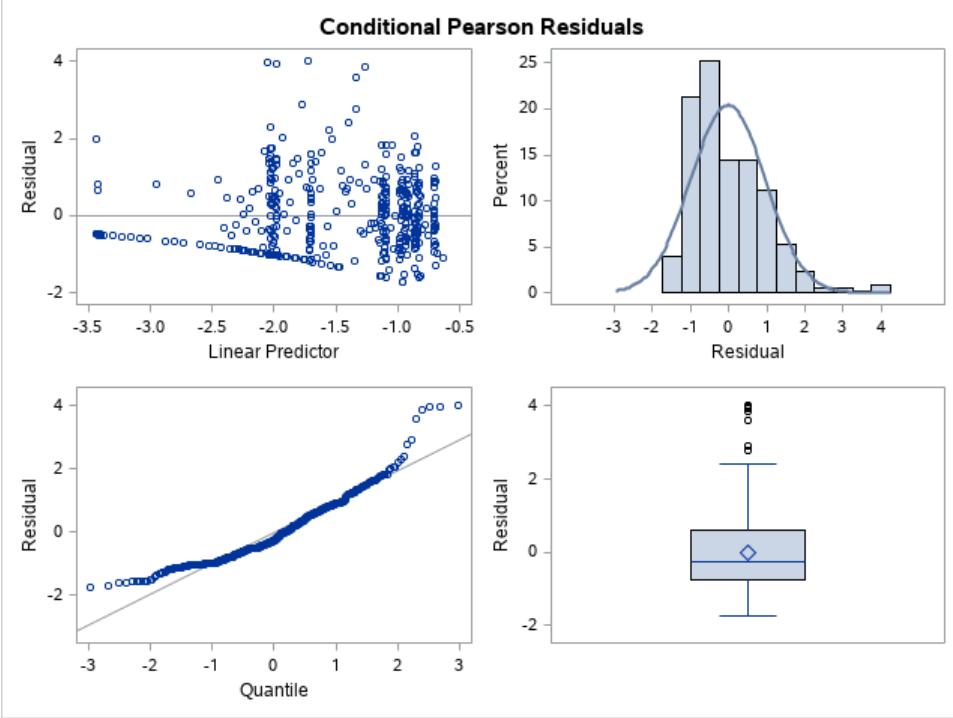
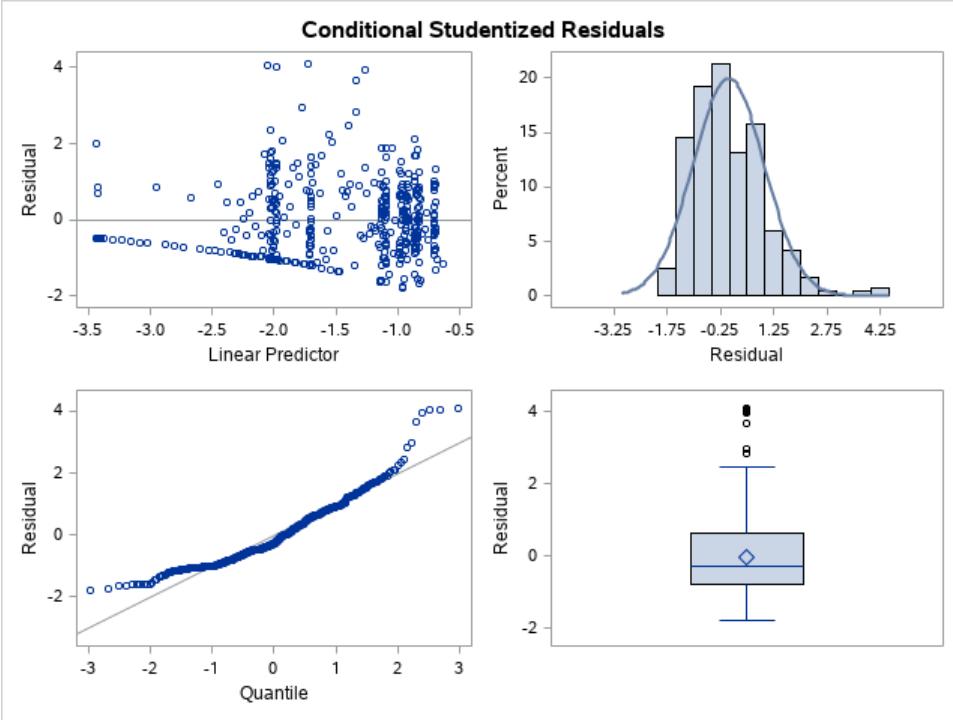
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1271.79
Generalized Chi-Square	90.09
Gener. Chi-Square / DF	0.21

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.5625	0.2423
t	TNK	0.2115	.
Scale		0.6502	0.1155

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.5649	0.3480	15	-4.50	0.0004
TRT	0.075ug/k	0.1603	0.4891	411	0.33	0.7433
TRT	0.75ug/kg	0.7180	0.4881	411	1.47	0.1421
TRT	control	0
d		0.001255	0.01093	411	0.11	0.9086
d*TRT	0.075ug/k	-0.00065	0.01536	411	-0.04	0.9661
d*TRT	0.75ug/kg	-0.07177	0.01647	411	-4.36	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	2.40	1.20	0.3013	0.3024
d	1	411	12.16	12.16	0.0005	0.0005
d*TRT	2	411	24.22	12.11	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	9	982.36973578	2.0000000	0.000025
1	0	7	1167.2747107	1.07142984	5.228E-6
2	0	5	1241.2170694	0.46642168	0.000201
3	0	5	1258.8176584	0.06122668	0.000119
4	0	2	1259.9691141	0.00106591	0.001438
5	0	2	1259.9556554	0.00001326	2.521E-6
6	0	1	1259.9558939	0.00000022	4.697E-7
7	0	0	1259.9558895	0.00000000	7.05E-6

Convergence criterion (PCONV=1.11022E-8) satisfied.

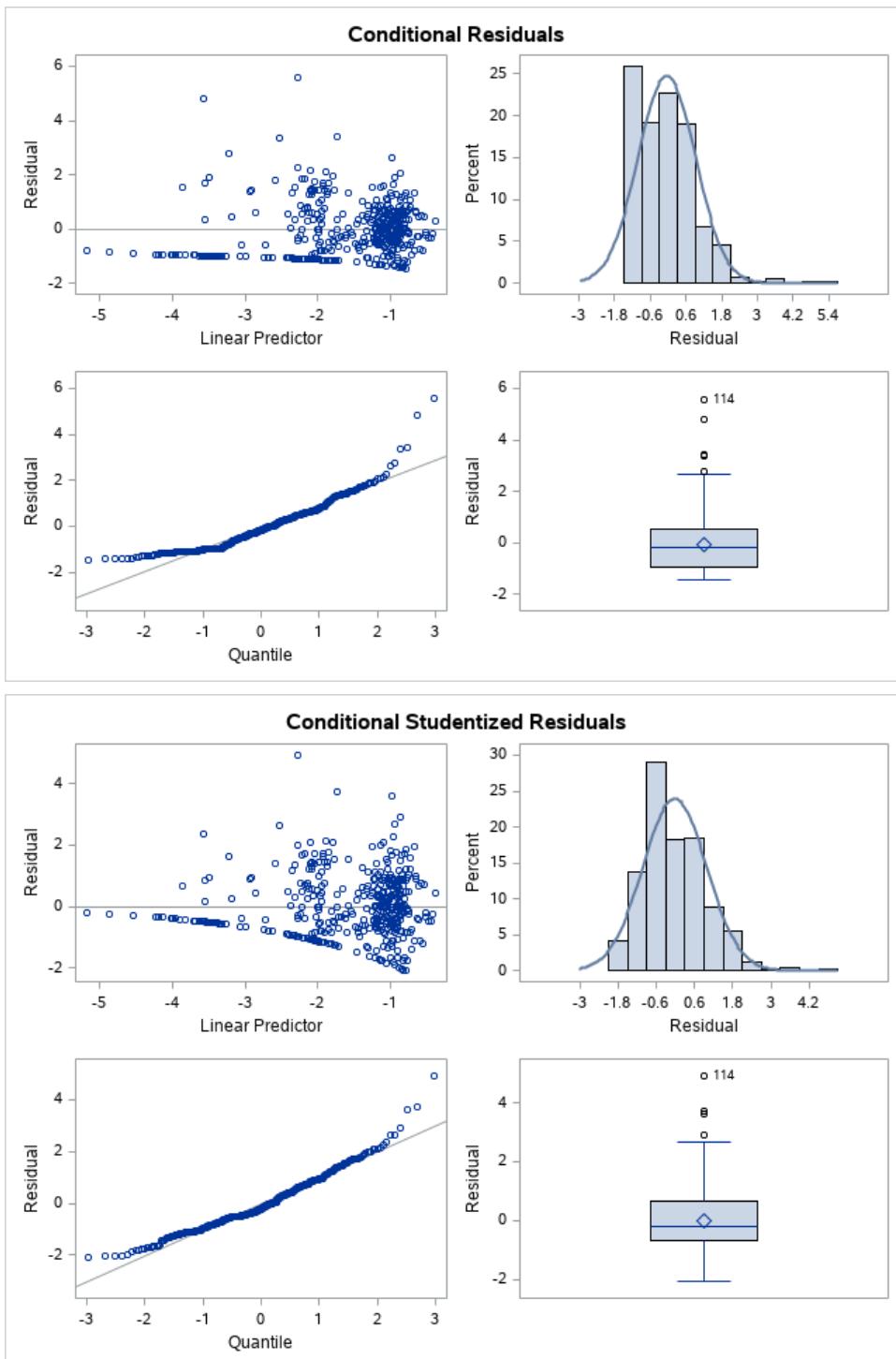
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1259.96
Generalized Chi-Square	97.27
Gener. Chi-Square / DF	0.23

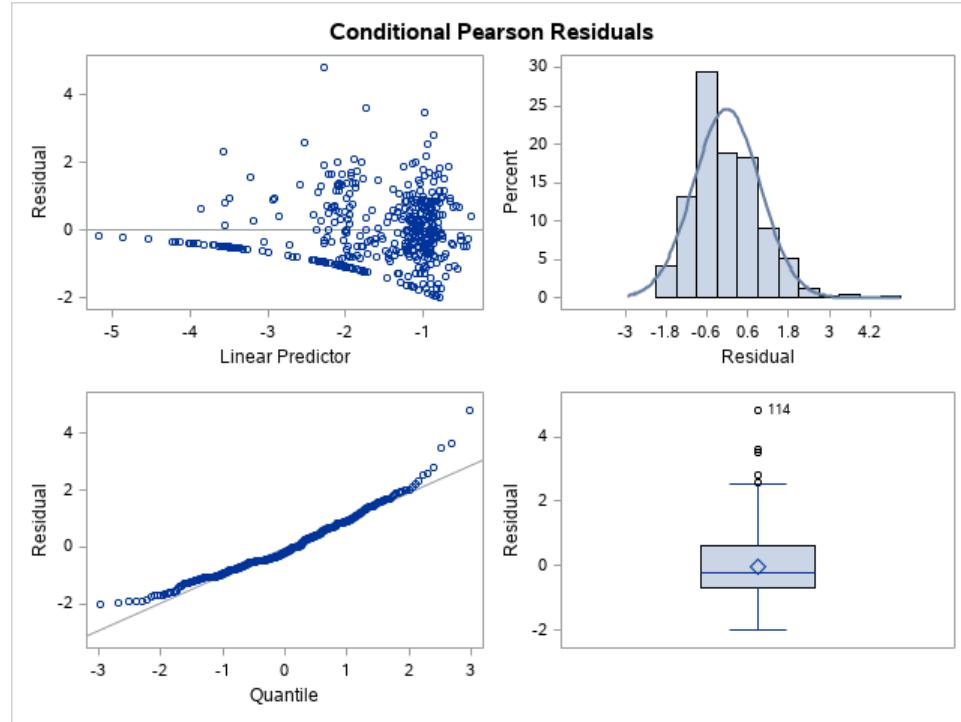
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.5881	0.2496
t	TNK	0.2300	.
Scale		1.0357	0.1430

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.6710	0.3702	15	-4.51	0.0004
TRT	0.075ug/k	-0.05477	0.5225	408	-0.10	0.9166
TRT	0.75ug/kg	0.1564	0.5200	408	0.30	0.7637
TRT	control	0
d		0.01490	0.01997	408	0.75	0.4559
T2		-0.03355	0.04198	408	-0.80	0.4247
d*TRT	0.075ug/k	0.03097	0.02816	408	1.10	0.2721
d*TRT	0.75ug/kg	0.01840	0.02830	408	0.65	0.5159
d*TRT	control	0
T2*TRT	0.075ug/k	-0.07846	0.05926	408	-1.32	0.1863
T2*TRT	0.75ug/kg	-0.3201	0.07241	408	-4.42	<.0001
T2*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	408	0.18	0.09	0.9145	0.9145

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
d	1	408	7.40	7.40	0.0065	0.0068
T2	1	408	35.63	35.63	<.0001	<.0001
d*TRT	2	408	1.22	0.61	0.5426	0.5431
T2*TRT	2	408	19.83	9.91	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	9	1136.4619099	2.0000000	2.954261

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	11	1313.0860115	2.00000000	0.000656
2	0	9	1090.0891048	1.92714036	0.061448
3	0	9	1178.0271586	2.00000000	0.000031
4	0	6	1173.3278095	0.58203022	0.000692
5	0	5	1194.6818923	0.16778813	0.002714
6	0	4	1192.9079114	0.11078315	0.000307
7	0	4	1194.2736484	0.01766366	0.000129
8	0	4	1193.9942583	0.00957211	0.00088
9	0	4	1194.0926115	0.00241620	0.000012
10	0	4	1194.064493	0.00077934	8.632E-6
11	0	3	1194.072493	0.00024268	0.004582
12	0	3	1194.0700495	0.00006137	1.231E-8
13	0	2	1194.0708548	0.00001956	0.000484
14	0	1	1194.0706975	0.00000880	0.000569
15	0	1	1194.0707435	0.00000217	0.000621
16	0	1	1194.070731	0.00000448	0.000645
17	0	1	1194.0707375	0.00000430	0.000655
18	0	1	1194.0707284	0.00000498	0.000675
19	0	1	1194.0707337	0.00000474	0.000687

Did not converge.

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.2411	.
Variance	TNK	0.4522	.
CS	TNK	0.1351	.
Scale		3.1975	.

The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	4
Lower Boundaries	4
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History						
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient	
0	0	11	916.00452343	1.90834396	0.013357	
1	0	8	1122.984828	2.00000000	0.000211	
2	0	6	1202.4791952	0.25857923	0.001974	
3	0	5	1218.958825	0.01865139	0.000028	
4	0	4	1219.3775607	0.00093636	0.000074	
5	0	3	1219.347283	0.00002872	0.000022	
6	0	2	1219.3480411	0.00000073	0.000021	
7	0	1	1219.3480228	0.00000005	0.000036	
8	0	1	1219.3480252	0.00000010	0.00009	
9	0	1	1219.3480241	0.00000025	0.000205	
10	0	1	1219.3480302	0.00000018	0.000019	
11	0	1	1219.3480269	0.00000038	0.000162	
12	0	1	1219.3480393	0.00000014	0.000011	
13	0	1	1219.3480365	0.00000023	0.00011	
14	0	1	1219.3480437	0.00000032	0.00027	
15	0	1	1219.3480377	0.00000023	6.572E-6	
16	0	0	1219.3480426	0.00000000	6.615E-6	

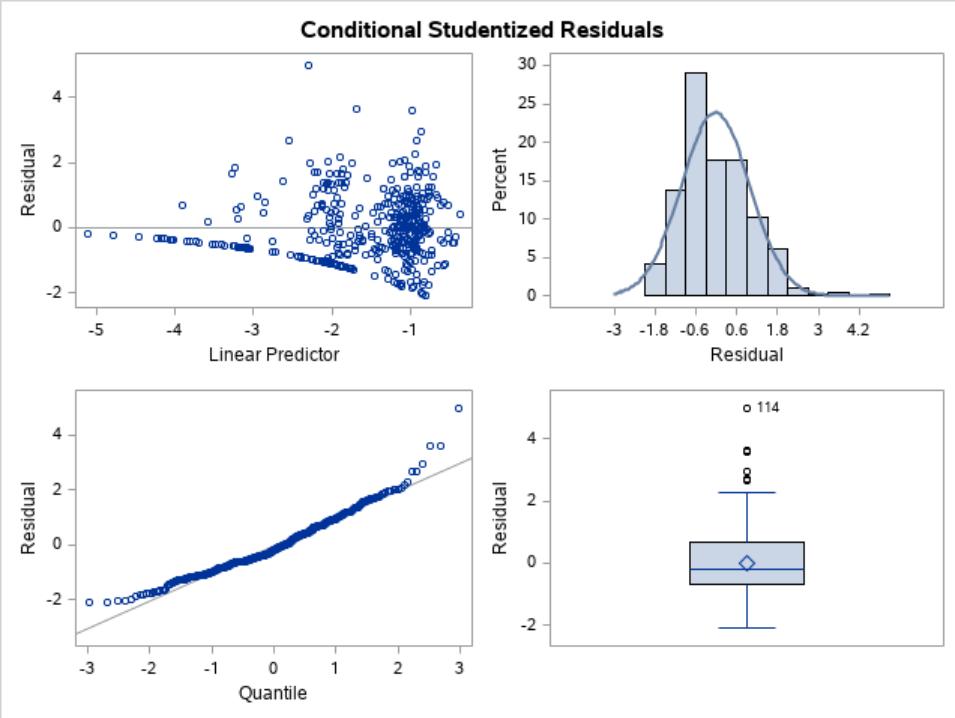
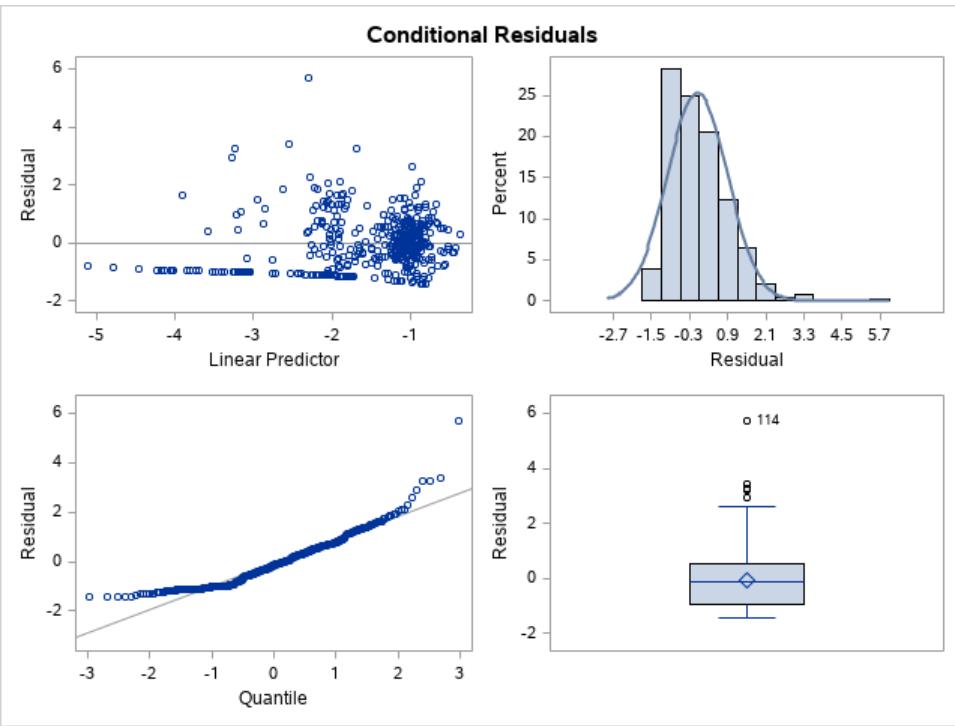
Convergence criterion (PCONV=1.11022E-8) satisfied.

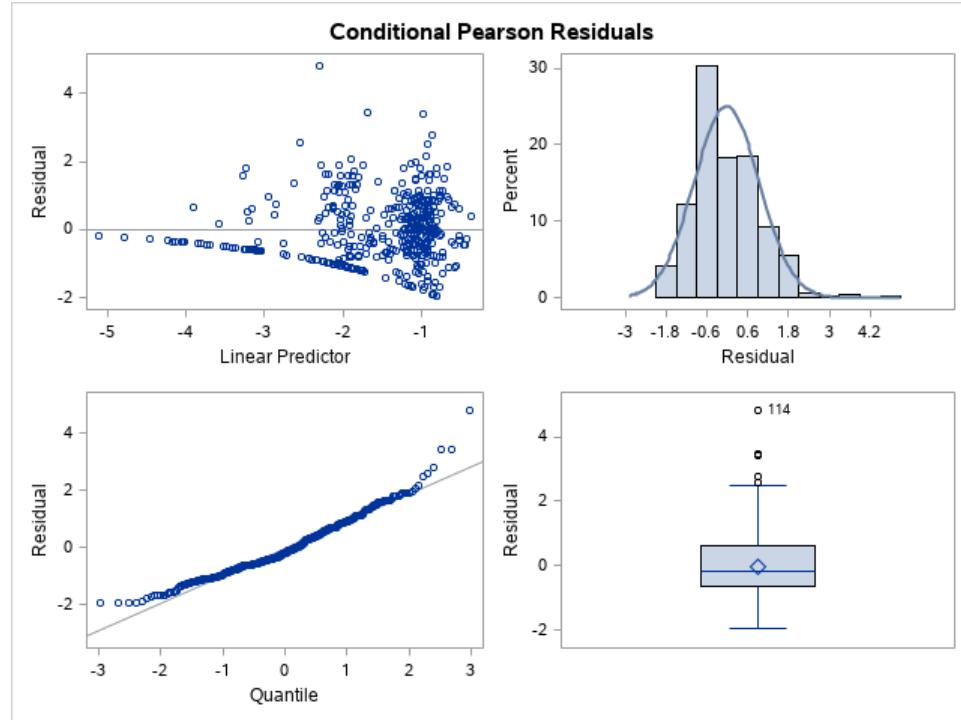
Fit Statistics		
-2 Res Log Pseudo-Likelihood	1219.35	
Generalized Chi-Square	423.00	
Gener. Chi-Square / DF	1.00	

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.4948	0.2274
Variance	TNK	0.3711	0.02964
AR(1)	TNK	0.2722	0.05193
Scale		2.1794	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.6310	0.3796	15	-4.30	0.0006
TRT	0.075ug/k	-0.1359	0.5380	408	-0.25	0.8006
TRT	0.75ug/kg	0.1316	0.5325	408	0.25	0.8049
TRT	control	0
d		0.01643	0.02546	408	0.65	0.5190
T2		-0.03731	0.05313	408	-0.70	0.4830
d*TRT	0.075ug/k	0.03467	0.03604	408	0.96	0.3366
d*TRT	0.75ug/kg	0.01658	0.03608	408	0.46	0.6461
d*TRT	control	0
T2*TRT	0.075ug/k	-0.08620	0.07523	408	-1.15	0.2525
T2*TRT	0.75ug/kg	-0.3195	0.09265	408	-3.45	0.0006
T2*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	408	0.25	0.13	0.8819	0.8819
d	1	408	5.18	5.18	0.0229	0.0234
T2	1	408	23.46	23.46	<.0001	<.0001
d*TRT	2	408	0.93	0.46	0.6294	0.6297
T2*TRT	2	408	11.97	5.98	0.0025	0.0027





The GLIMMIX Procedure

Model Information	
Data Set	WORK.LETROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug/k 0.75ug/kg control

Number of Observations Read	433
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	4
Lower Boundaries	4
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	11	916.00452343	1.90834396	0.013357

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	8	1122.984828	2.00000000	0.000211
2	0	6	1202.4791952	0.25857923	0.001974
3	0	5	1218.958825	0.01865139	0.000028
4	0	4	1219.3775607	0.00093636	0.000074
5	0	3	1219.347283	0.00002872	0.000022
6	0	2	1219.3480411	0.00000073	0.000021
7	0	1	1219.3480228	0.00000005	0.000036
8	0	1	1219.3480252	0.00000010	0.00009
9	0	1	1219.3480241	0.00000025	0.000205
10	0	1	1219.3480302	0.00000018	0.000019
11	0	1	1219.3480269	0.00000038	0.000162
12	0	1	1219.3480393	0.00000014	0.000011
13	0	1	1219.3480365	0.00000023	0.00011
14	0	1	1219.3480437	0.00000032	0.00027
15	0	1	1219.3480377	0.00000023	6.572E-6
16	0	0	1219.3480426	0.00000000	6.615E-6

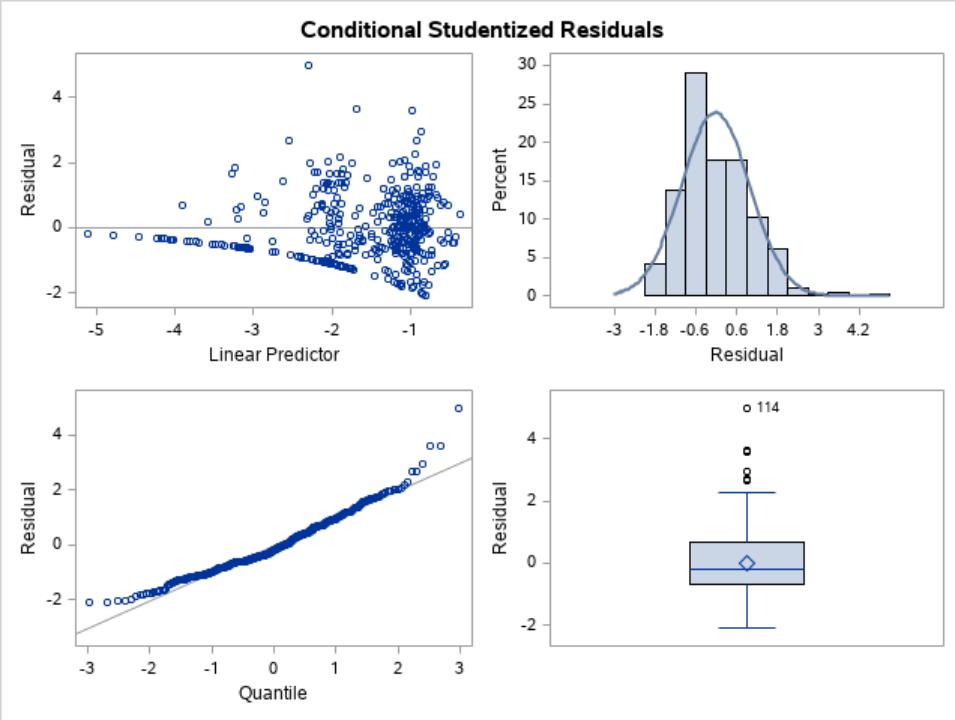
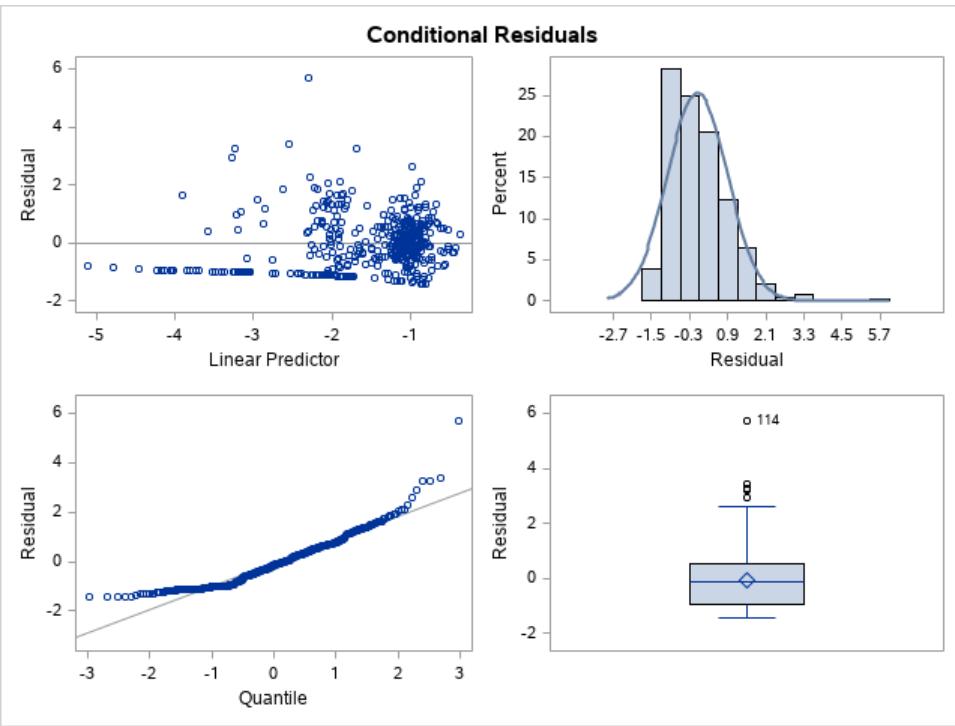
Convergence criterion (PCONV=1.11022E-8) satisfied.

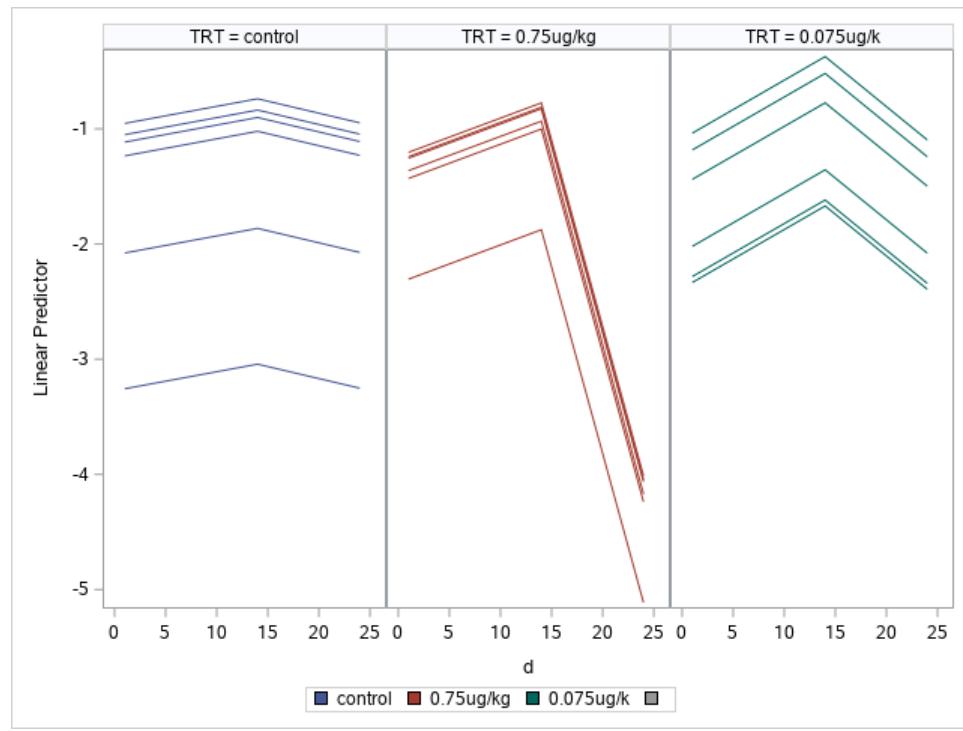
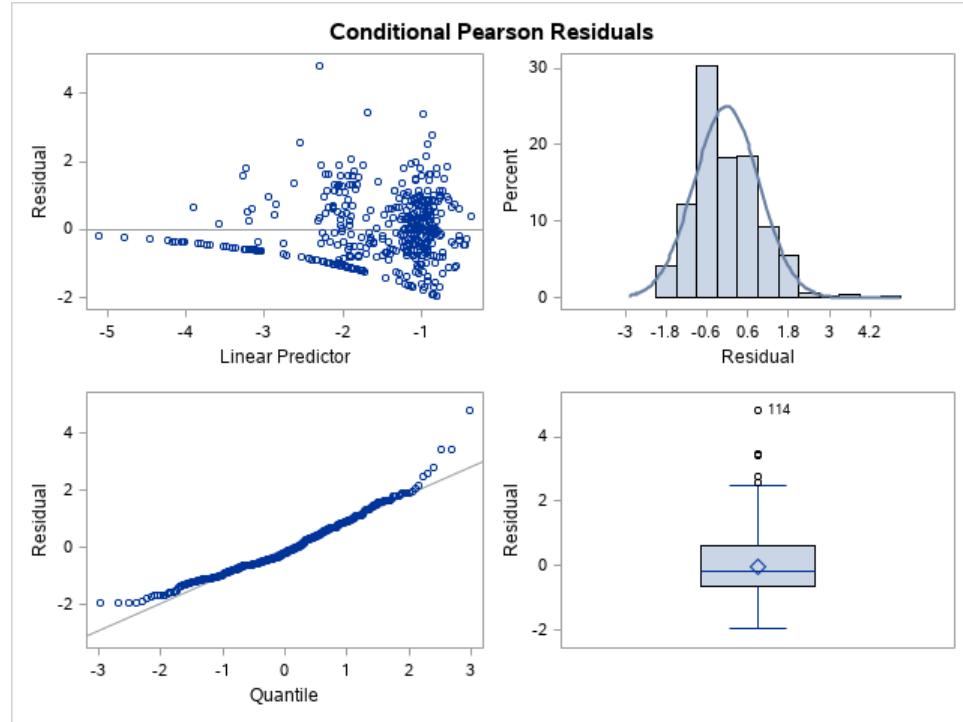
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1219.35
Generalized Chi-Square	423.00
Gener. Chi-Square / DF	1.00

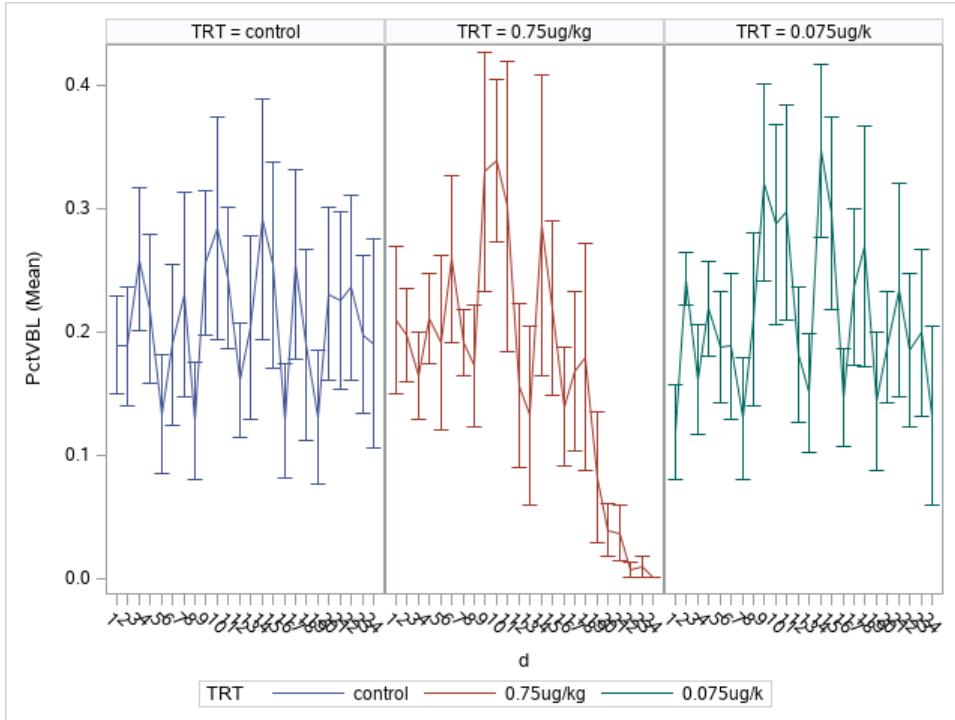
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.4948	0.2274
Variance	TNK	0.3711	0.02964
AR(1)	TNK	0.2722	0.05193
Scale		2.1794	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	
					Pr > t	
Intercept		-1.6310	0.3796	15	-4.30	0.0006
TRT	0.075ug/k	-0.1359	0.5380	408	-0.25	0.8006
TRT	0.75ug/kg	0.1316	0.5325	408	0.25	0.8049
TRT	control	0
d		0.01643	0.02546	408	0.65	0.5190
T2		-0.03731	0.05313	408	-0.70	0.4830
d*TRT	0.075ug/k	0.03467	0.03604	408	0.96	0.3366
d*TRT	0.75ug/kg	0.01658	0.03608	408	0.46	0.6461
d*TRT	control	0
T2*TRT	0.075ug/k	-0.08620	0.07523	408	-1.15	0.2525
T2*TRT	0.75ug/kg	-0.3195	0.09265	408	-3.45	0.0006
T2*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	408	0.25	0.13	0.8819	0.8819
d	1	408	5.18	5.18	0.0229	0.0234
T2	1	408	23.46	23.46	<.0001	<.0001
d*TRT	2	408	0.93	0.46	0.6294	0.6297
T2*TRT	2	408	11.97	5.98	0.0025	0.0027







The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	Eggs_gFem
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4099.1727458	.	0.000027

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
1	0	4	4099.1727458	0.00000000	0.000027

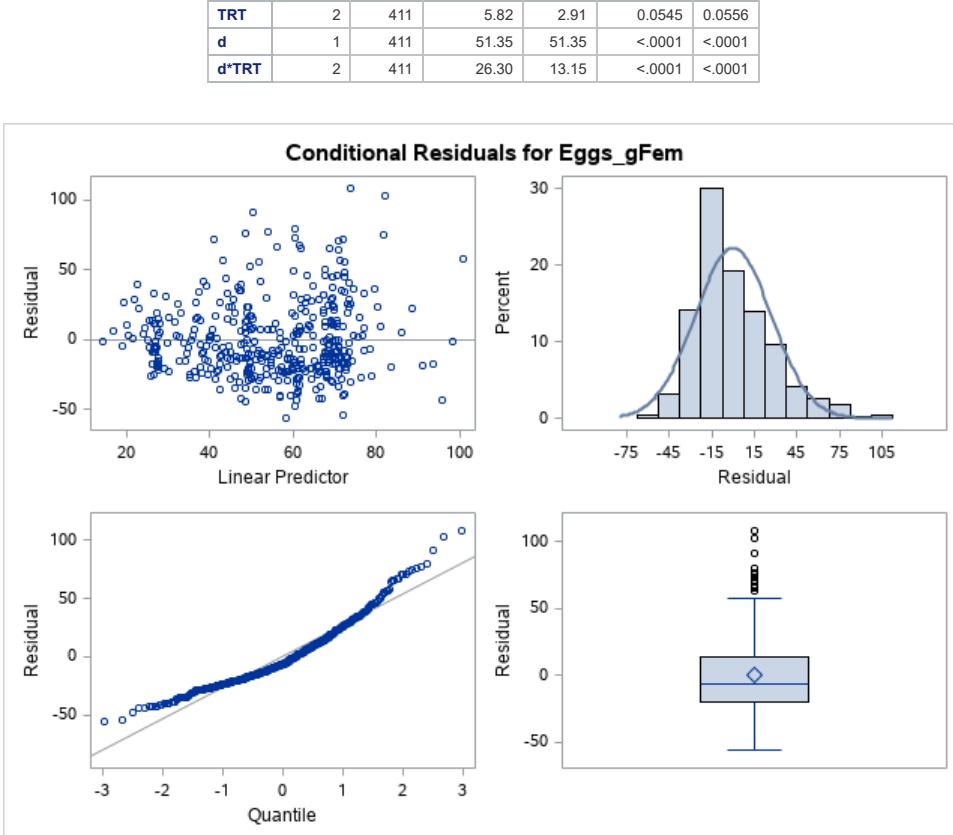
Convergence criterion (GCONV=1E-8) satisfied.

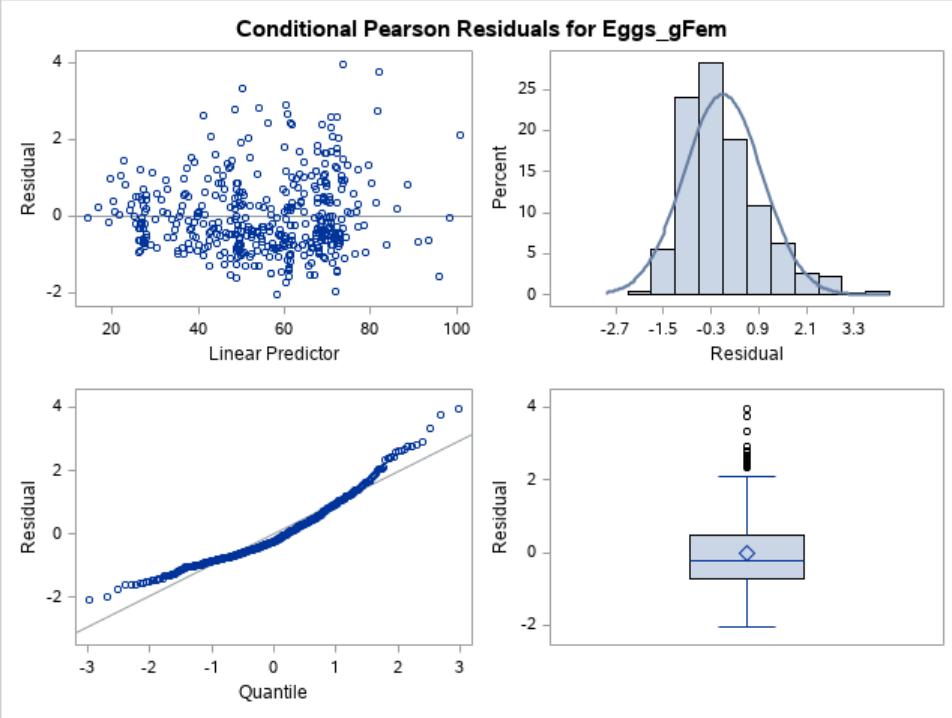
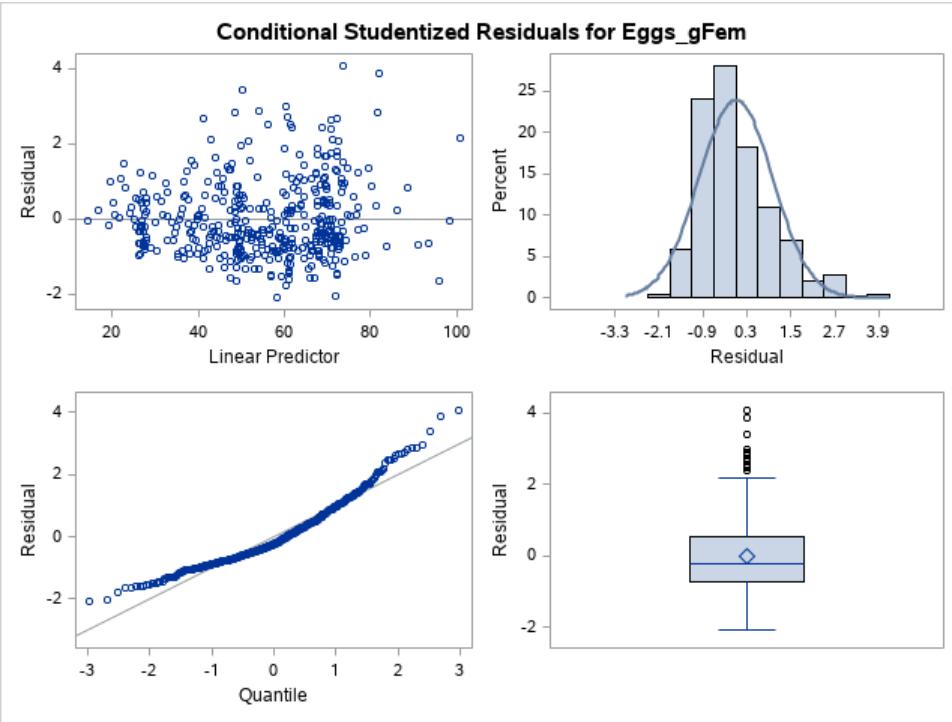
Fit Statistics	
-2 Res Log Likelihood	4099.17
AIC (smaller is better)	4103.17
AICC (smaller is better)	4103.20
BIC (smaller is better)	4104.95
CAIC (smaller is better)	4106.95
HQIC (smaller is better)	4103.42
Generalized Chi-Square	320045.1
Gener. Chi-Square / DF	751.28

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	170.23	73.6231
Residual (VC)		751.28	52.4078

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		59.0525	7.1136	15	8.30	<.0001
TRT	0.3mg/kg	15.6312	10.0601	411	1.55	0.1210
TRT	3mg/kg	23.8907	10.0601	411	2.37	0.0180
TRT	control	0
d		-0.08432	0.3302	411	-0.26	0.7985
d*TRT	0.3mg/kg	-1.4723	0.4668	411	-3.15	0.0017
d*TRT	3mg/kg	-2.3710	0.4668	411	-5.08	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	5.82	2.91	0.0545	0.0556
d	1	411	51.35	51.35	<.0001	<.0001
d*TRT	2	411	26.30	13.15	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	Eggs_gFem
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	12
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4017.6587081	.	0.000078
1	0	4	4017.6587081	0.00000000	0.000078

Convergence criterion (GCONV=1E-8) satisfied.

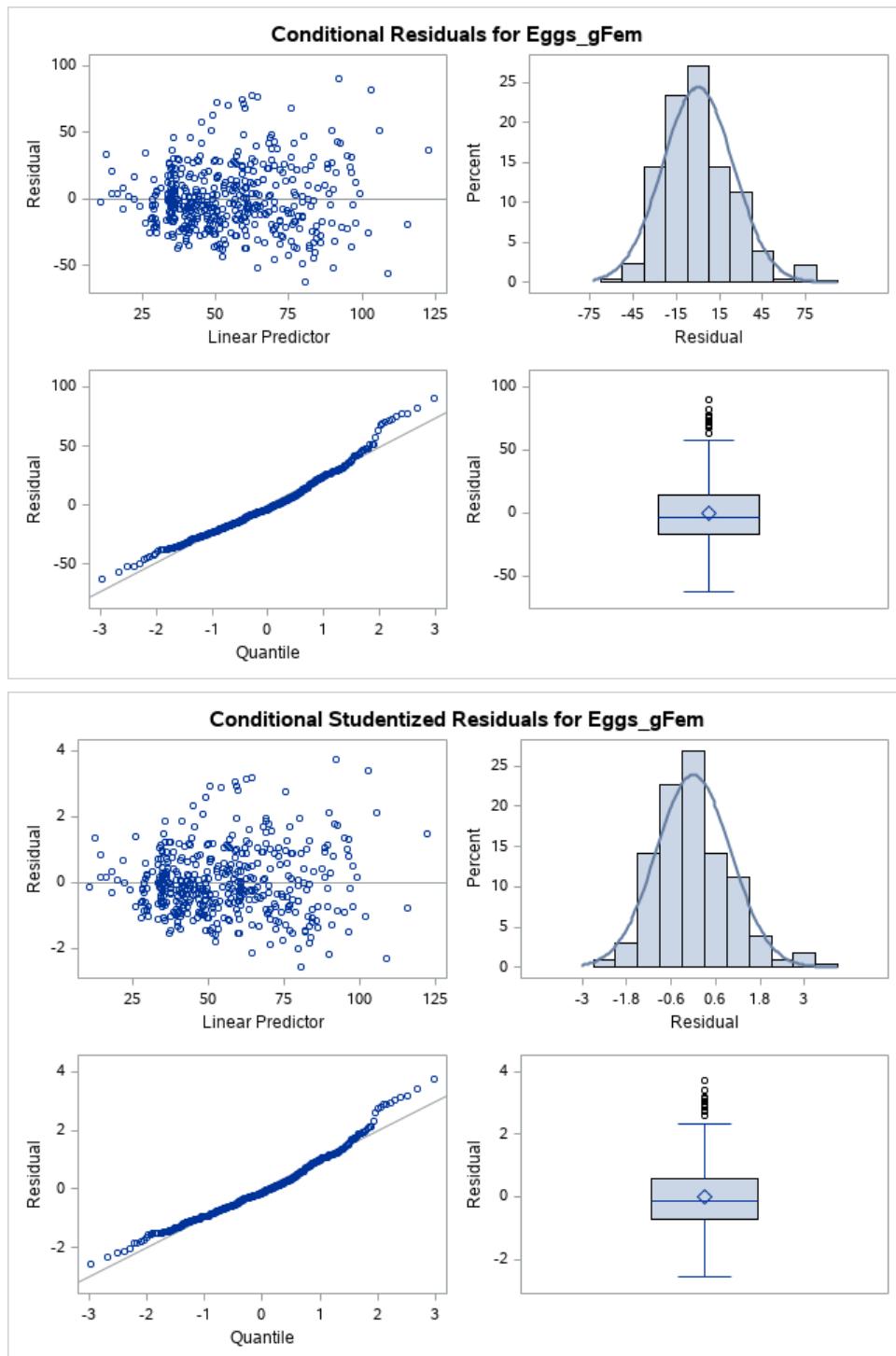
Fit Statistics	
-2 Res Log Likelihood	4017.66
AIC (smaller is better)	4021.66
AICC (smaller is better)	4021.69
BIC (smaller is better)	4023.44
CAIC (smaller is better)	4025.44
HQIC (smaller is better)	4021.90
Generalized Chi-Square	267056.2
Gener. Chi-Square / DF	631.34

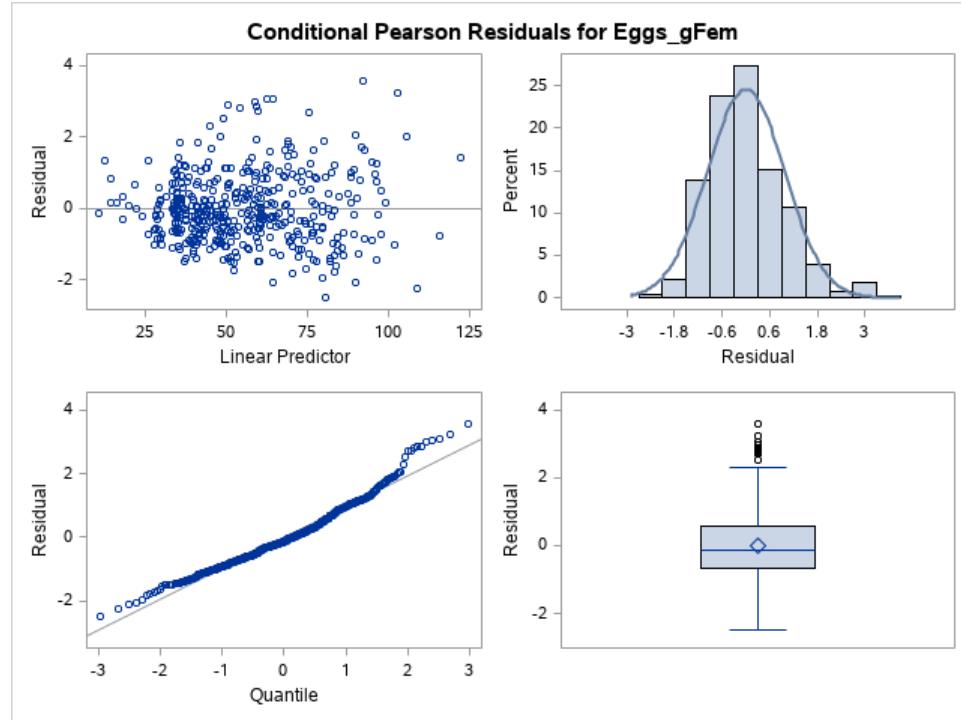
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	175.42	73.6835
Residual (VC)		631.34	44.2025

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		80.8310	8.4849	15	9.53	<.0001
TRT	0.3mg/kg	22.6832	11.9998	408	1.89	0.0594
TRT	3mg/kg	27.5442	11.9998	408	2.30	0.0222
TRT	control	0
d		-3.8288	0.8962	408	-4.27	<.0001
T1		5.7237	1.2895	408	4.44	<.0001
d*TRT	0.3mg/kg	-2.6867	1.2678	408	-2.12	0.0347
d*TRT	3mg/kg	-3.0008	1.2678	408	-2.37	0.0184
d*TRT	control	0
T1*TRT	0.3mg/kg	1.8546	1.8240	408	1.02	0.3099
T1*TRT	3mg/kg	0.9613	1.8240	408	0.53	0.5984
T1*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	408	6.00	3.00	0.0497	0.0508
d	1	408	122.32	122.32	<.0001	<.0001

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
T1	1	408	80.04	80.04	<.0001	<.0001
d*TRT	2	408	6.77	3.39	0.0339	0.0348
T1*TRT	2	408	1.03	0.52	0.5962	0.5966





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1785.231309	.	0.000012
1	0	4	1785.231309	0.00000000	0.000012

Convergence criterion (GCONV=1E-8) satisfied.

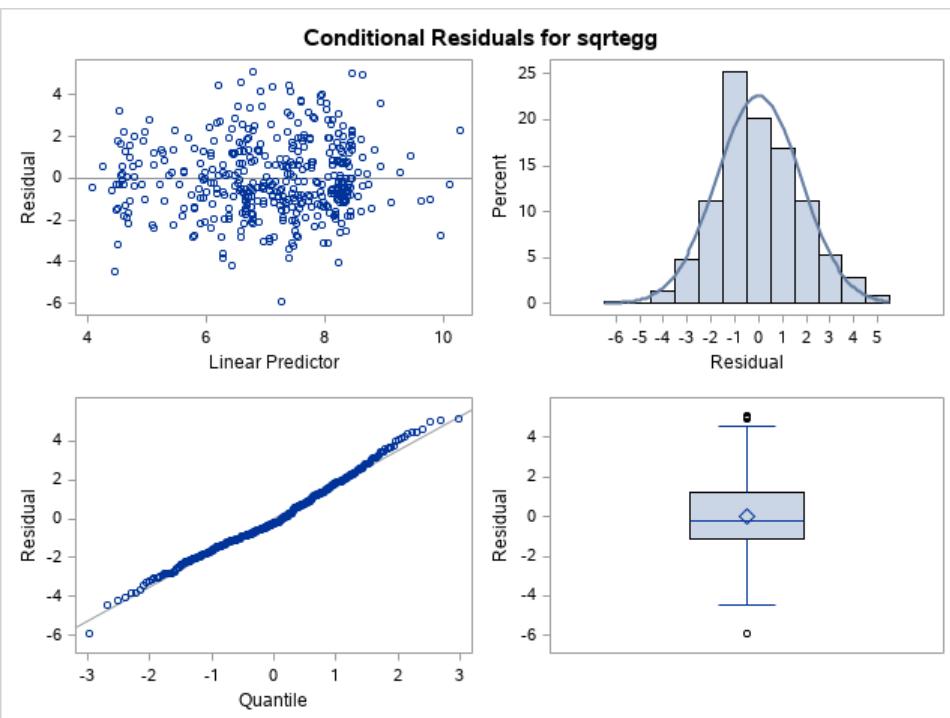
Fit Statistics	
-2 Res Log Likelihood	1785.23
AIC (smaller is better)	1789.23
AICC (smaller is better)	1789.26
BIC (smaller is better)	1791.01
CAIC (smaller is better)	1793.01
HQIC (smaller is better)	1789.48
Generalized Chi-Square	1384.38
Gener. Chi-Square / DF	3.25

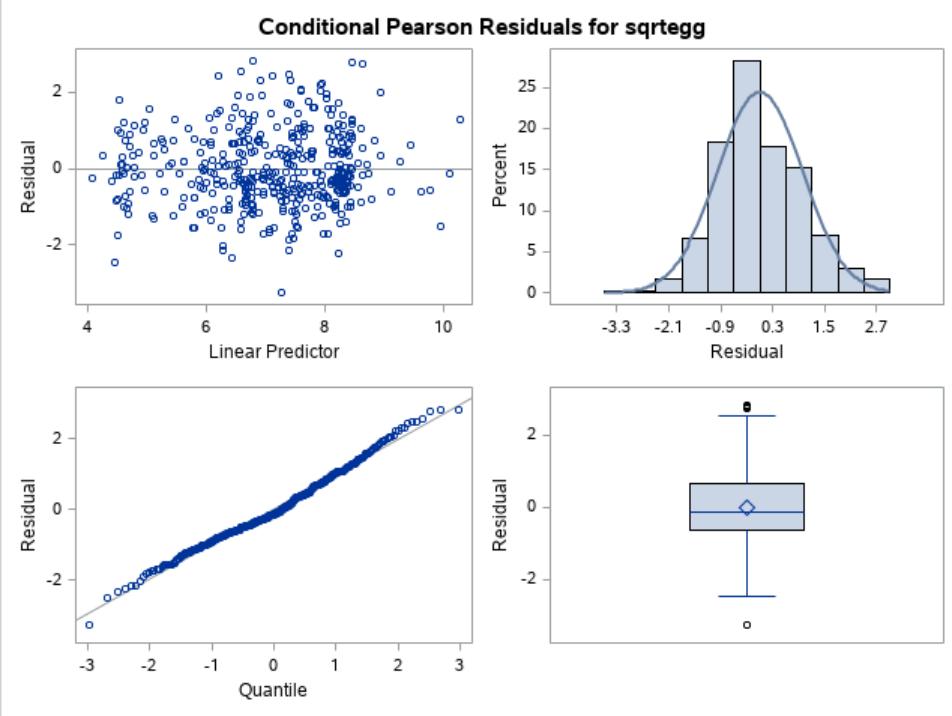
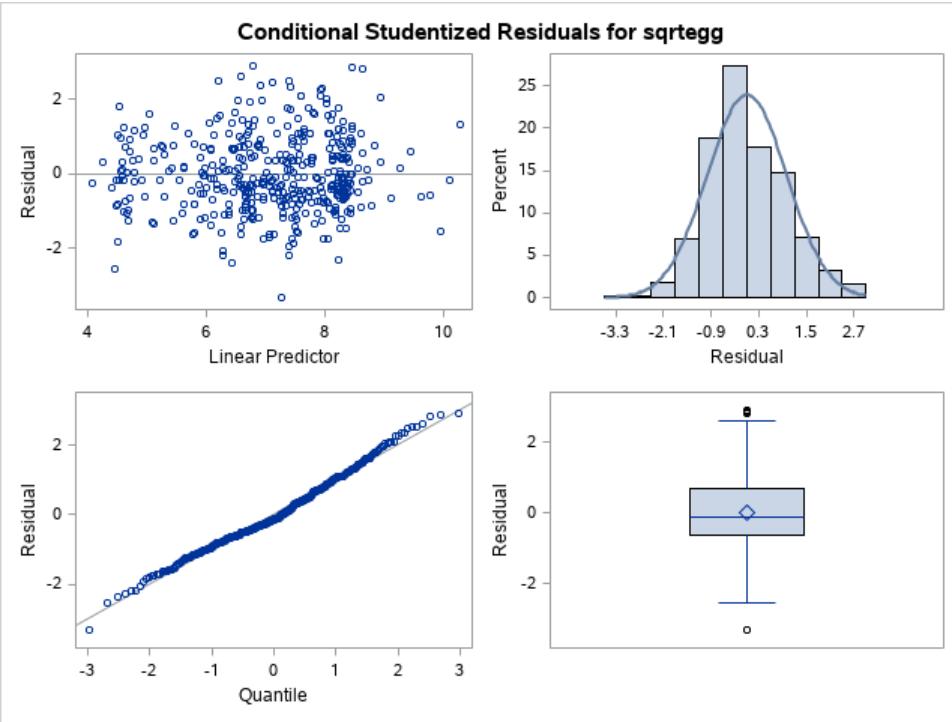
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.0705	0.4404
Residual (VC)		3.2497	0.2267

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		7.4011	0.5240	15	14.12	<.0001
TRT	0.3mg/kg	0.9784	0.7410	411	1.32	0.1875
TRT	3mg/kg	1.5641	0.7410	411	2.11	0.0354
TRT	control	0
d		-0.01124	0.02171	411	-0.52	0.6051
d*TRT	0.3mg/kg	-0.08577	0.03070	411	-2.79	0.0055
d*TRT	3mg/kg	-0.1557	0.03070	411	-5.07	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	4.55	2.27	0.1029	0.1042
d	1	411	53.58	53.58	<.0001	<.0001
d*TRT	2	411	25.81	12.91	<.0001	<.0001

TRT	2	411	4.55	2.27	0.1029	0.1042
d	1	411	53.58	53.58	<.0001	<.0001
d*TRT	2	411	25.81	12.91	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1785.231309	.	0.000012
1	0	4	1785.231309	-0.00000000	0.000012

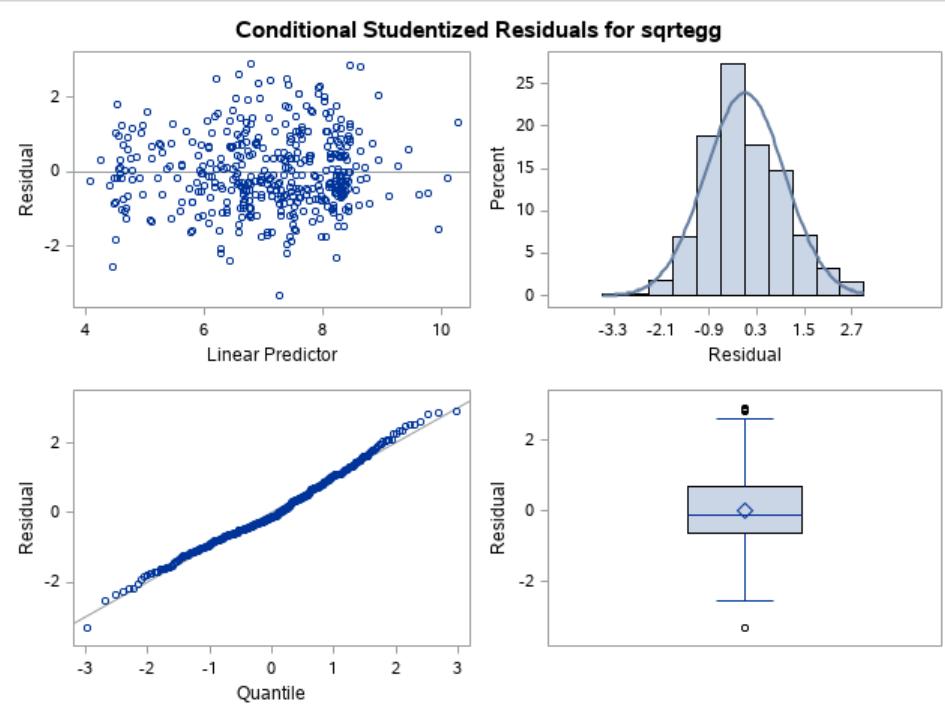
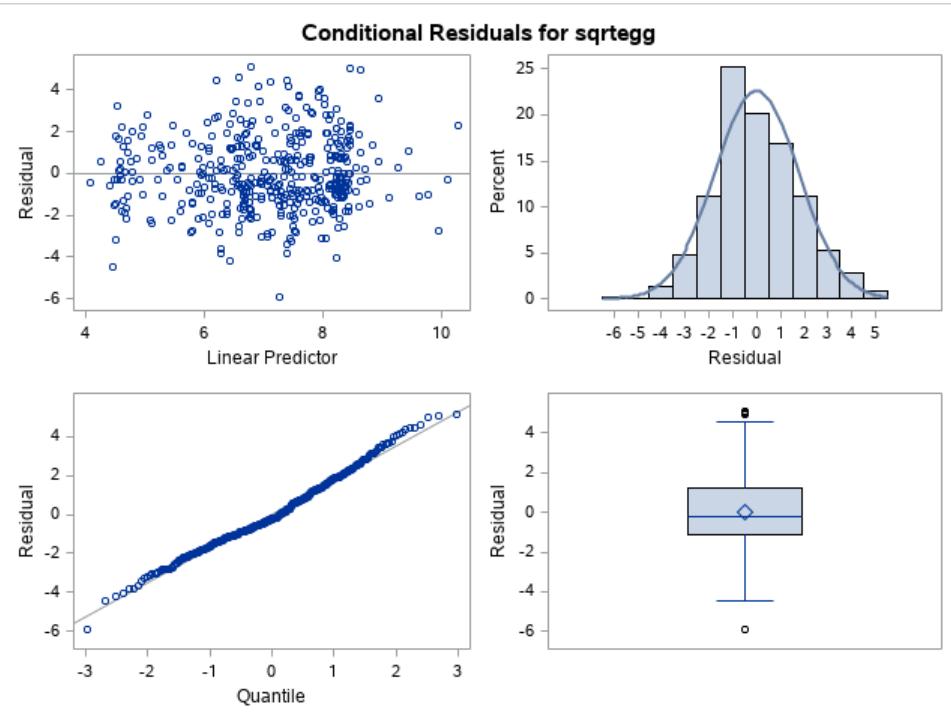
Convergence criterion (GCONV=1E-8) satisfied.

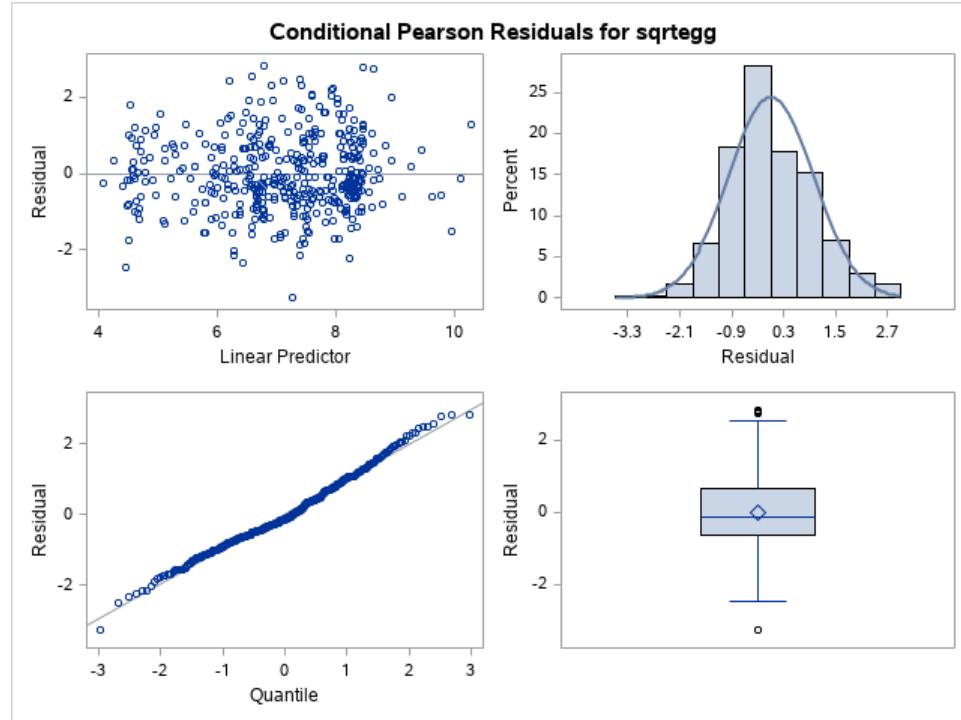
Fit Statistics	
-2 Res Log Likelihood	1785.23
AIC (smaller is better)	1791.23
AICC (smaller is better)	1791.29
BIC (smaller is better)	1793.90
CAIC (smaller is better)	1796.90
HQIC (smaller is better)	1791.60
Generalized Chi-Square	1384.38
Gener. Chi-Square / DF	3.25

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.0705	0.4404
CS	TNK	4.049E-7	.
Residual		3.2497	0.2267

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		7.4011	0.5240	15	14.12	<.0001
TRT	0.3mg/kg	0.9784	0.7410	411	1.32	0.1875
TRT	3mg/kg	1.5641	0.7410	411	2.11	0.0354
TRT	control	0
d		-0.01124	0.02171	411	-0.52	0.6051
d*TRT	0.3mg/kg	-0.08577	0.03070	411	-2.79	0.0055
d*TRT	3mg/kg	-0.1557	0.03070	411	-5.07	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	4.55	2.27	0.1029	0.1042
d	1	411	53.58	53.58	<.0001	<.0001
d*TRT	2	411	25.81	12.91	<.0001	<.0001





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1785.231309	.	0.000012
1	0	4	1785.231309	0.00000000	0.000012

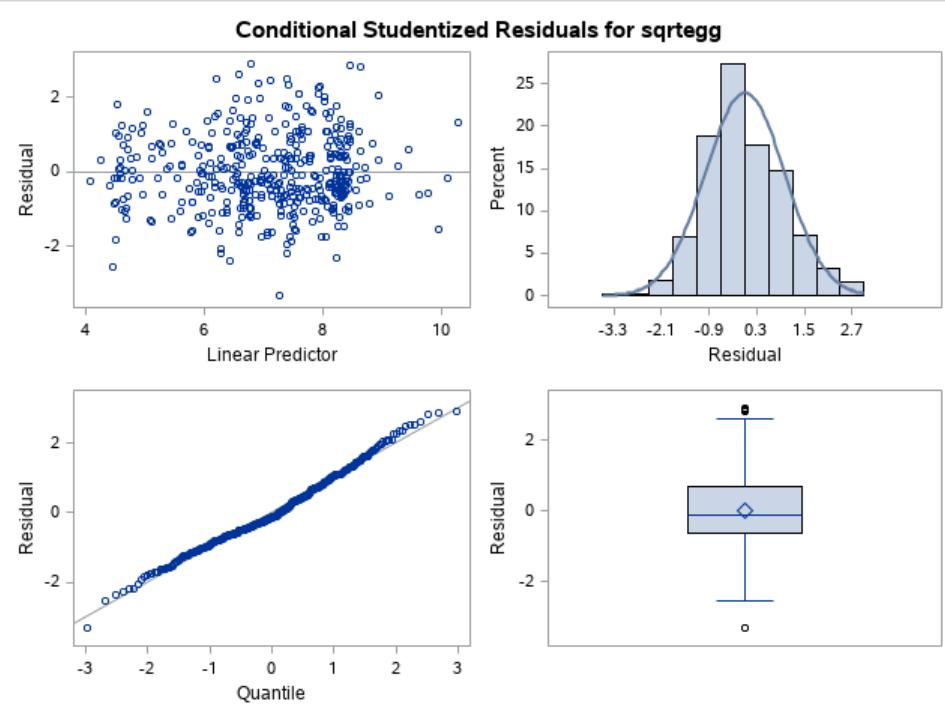
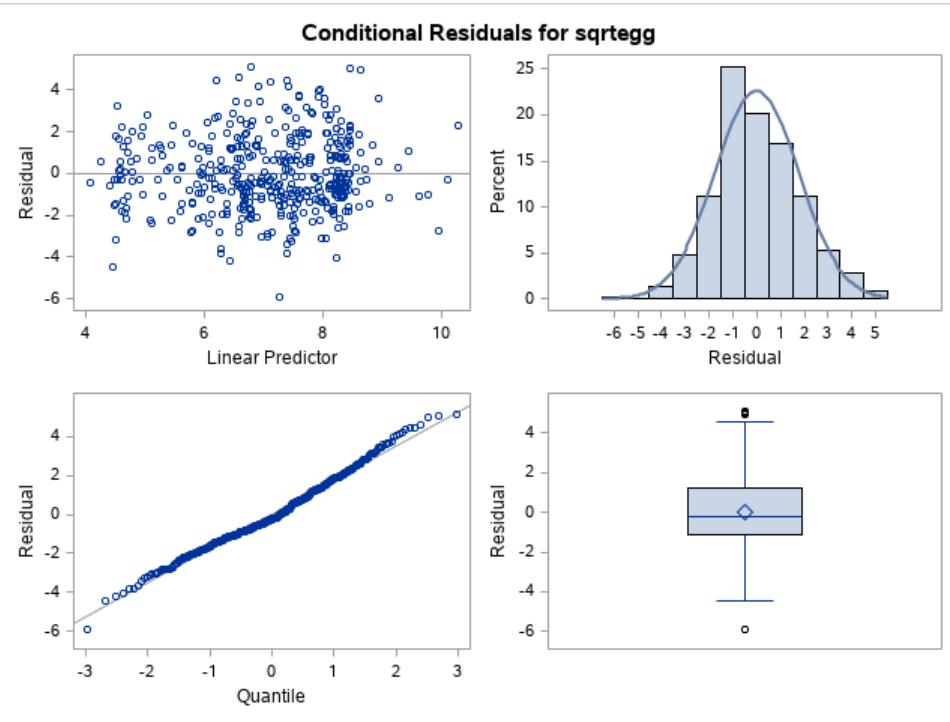
Convergence criterion (GCONV=1E-8) satisfied.

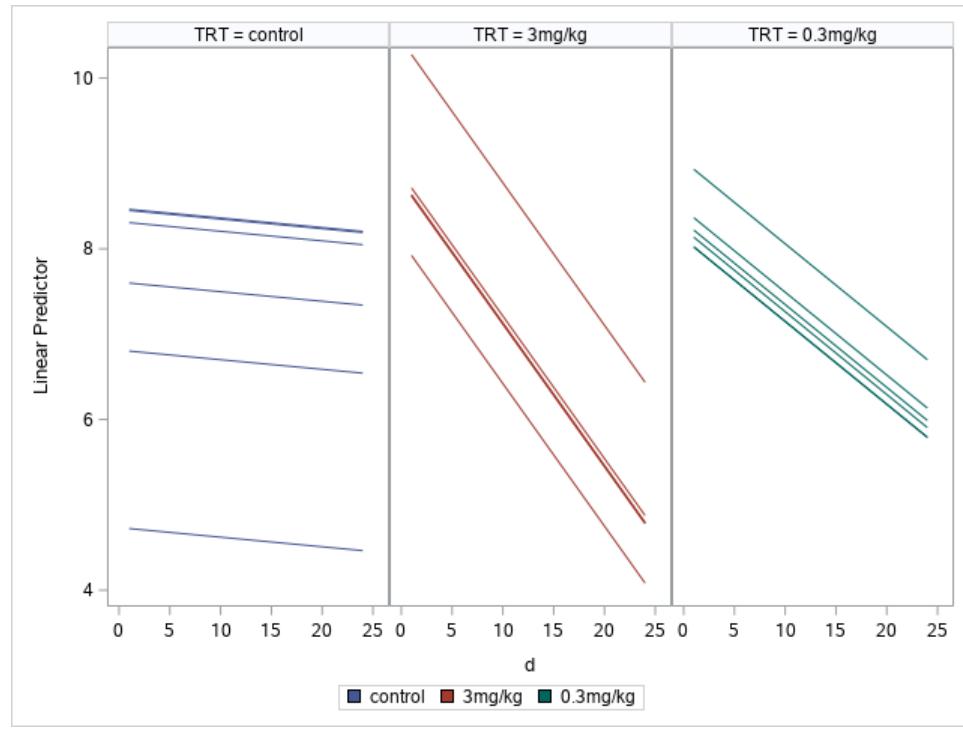
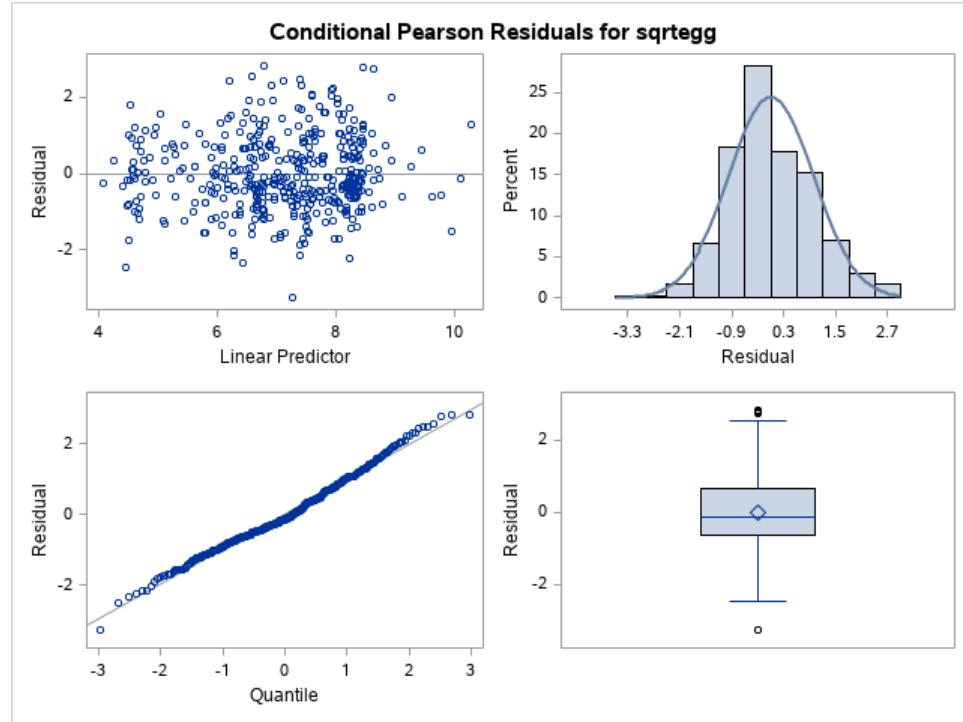
Fit Statistics	
-2 Res Log Likelihood	1785.23
AIC (smaller is better)	1789.23
AICC (smaller is better)	1789.26
BIC (smaller is better)	1791.01
CAIC (smaller is better)	1793.01
HQIC (smaller is better)	1789.48
Generalized Chi-Square	1384.38
Gener. Chi-Square / DF	3.25

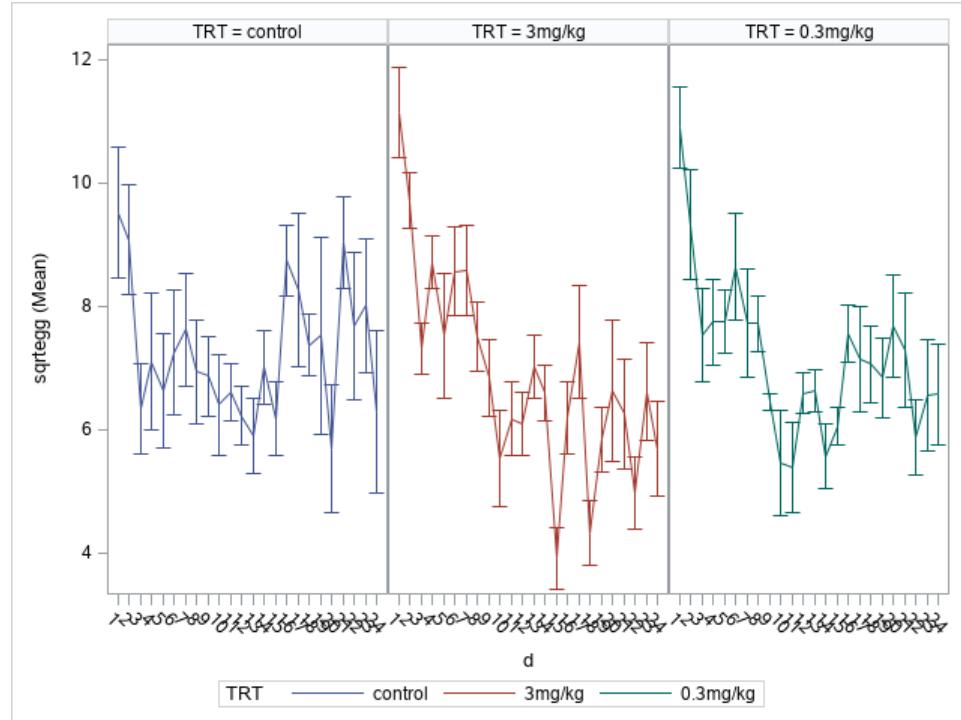
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	1.0705	0.4404
Residual (VC)		3.2497	0.2267

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		7.4011	0.5240	15	14.12	<.0001
TRT	0.3mg/kg	0.9784	0.7410	411	1.32	0.1875
TRT	3mg/kg	1.5641	0.7410	411	2.11	0.0354
TRT	control	0
d		-0.01124	0.02171	411	-0.52	0.6051
d*TRT	0.3mg/kg	-0.08577	0.03070	411	-2.79	0.0055
d*TRT	3mg/kg	-0.1557	0.03070	411	-5.07	<.0001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	4.55	2.27	0.1029	0.1042
d	1	411	53.58	53.58	<.0001	<.0001
d*TRT	2	411	25.81	12.91	<.0001	<.0001







The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	7	1340.1316164	2.0000000	1.59E-7
1	0	5	1391.6849691	0.61977439	0.000201

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
2	0	3	1402.5856053	0.37645069	0.000026
3	0	2	1403.0441486	0.17319086	1.006E-8
4	0	1	1403.0398929	0.00000604	2.733E-8
5	0	1	1403.0399845	0.00000060	9.03E-10
6	0	0	1403.0399827	0.00000000	2.816E-6

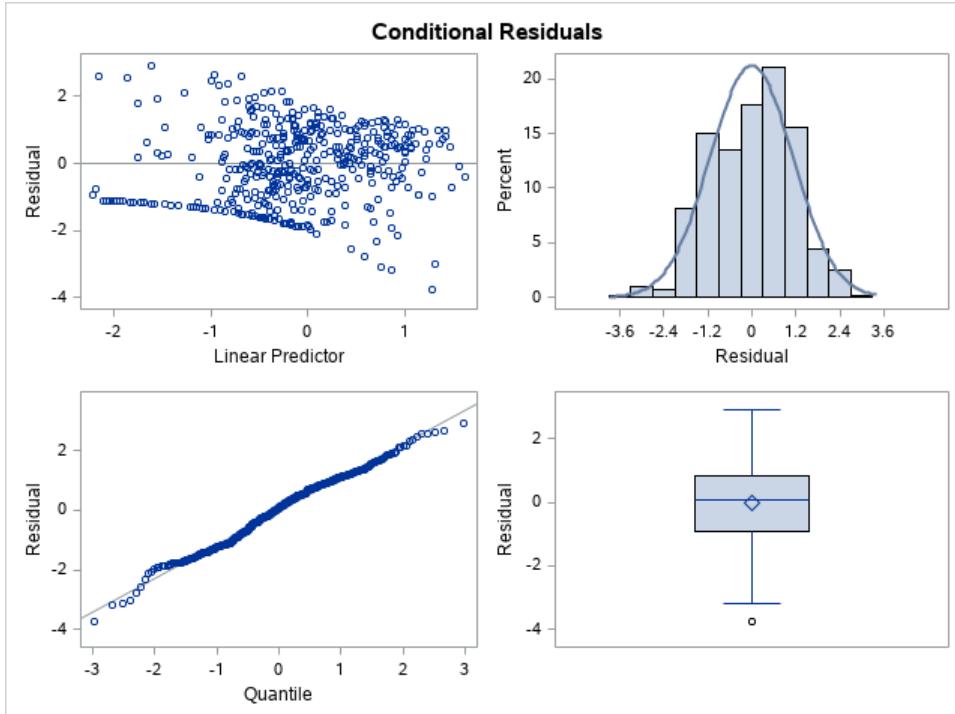
Convergence criterion (PCONV=1.11022E-8) satisfied.

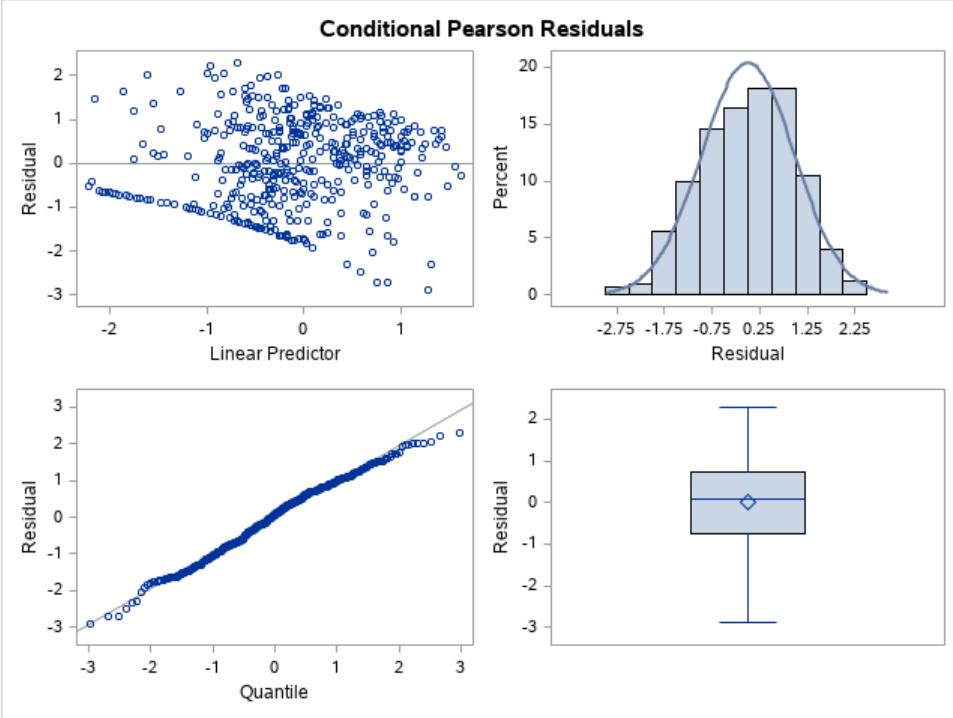
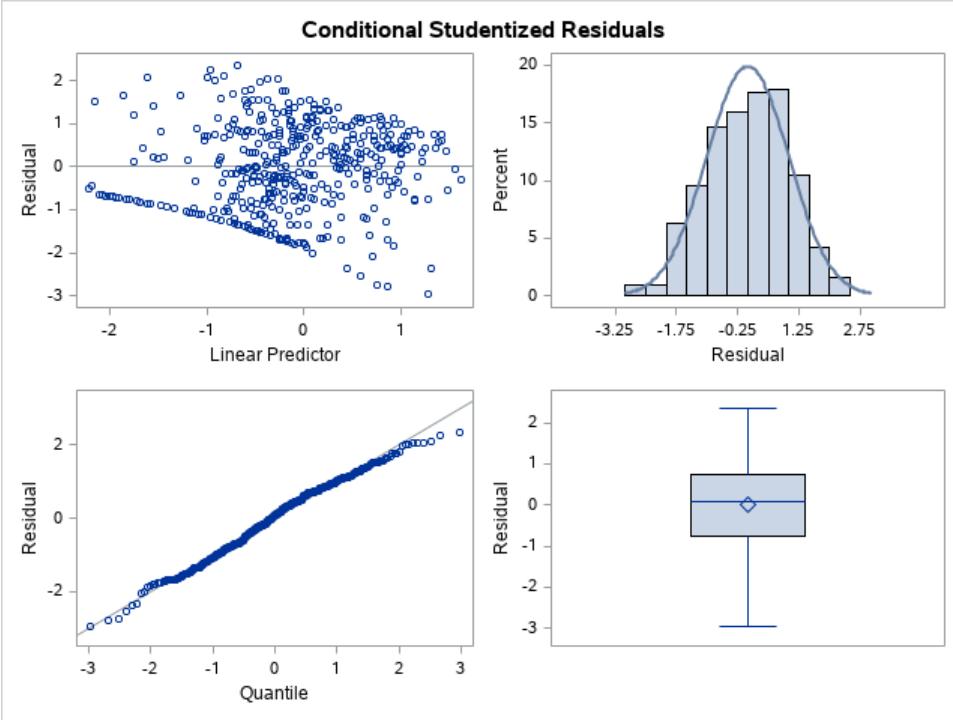
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1403.04
Generalized Chi-Square	124.00
Gener. Chi-Square / DF	0.29

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.5876	0.2408
t	TNK	0.2918	.
Scale		0.01360	0.07086

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.3822	0.3676	15	1.04	0.3149
TRT	0.3mg/kg	-0.2920	0.5229	410	-0.56	0.5770
TRT	3mg/kg	0.5285	0.5228	410	1.01	0.3126
TRT	control	0
d		-0.03196	0.01353	410	-2.36	0.0186
d*TRT	0.3mg/kg	-0.00334	0.01966	410	-0.17	0.8652
d*TRT	3mg/kg	-0.03751	0.01950	410	-1.92	0.0551
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	410	2.50	1.25	0.2860	0.2871
d	1	410	32.03	32.03	<.0001	<.0001
d*TRT	2	410	4.42	2.21	0.1095	0.1108





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLE1
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	7	1340.1316164	2.0000000	1.59E-7
1	0	5	1391.6849691	0.61977439	0.000201
2	0	3	1402.5856053	0.37645069	0.000026
3	0	2	1403.0441486	0.17319086	1.006E-8
4	0	1	1403.0398929	0.00000604	2.733E-8
5	0	1	1403.0399845	0.00000060	9.03E-10
6	0	0	1403.0399827	0.00000000	2.816E-6

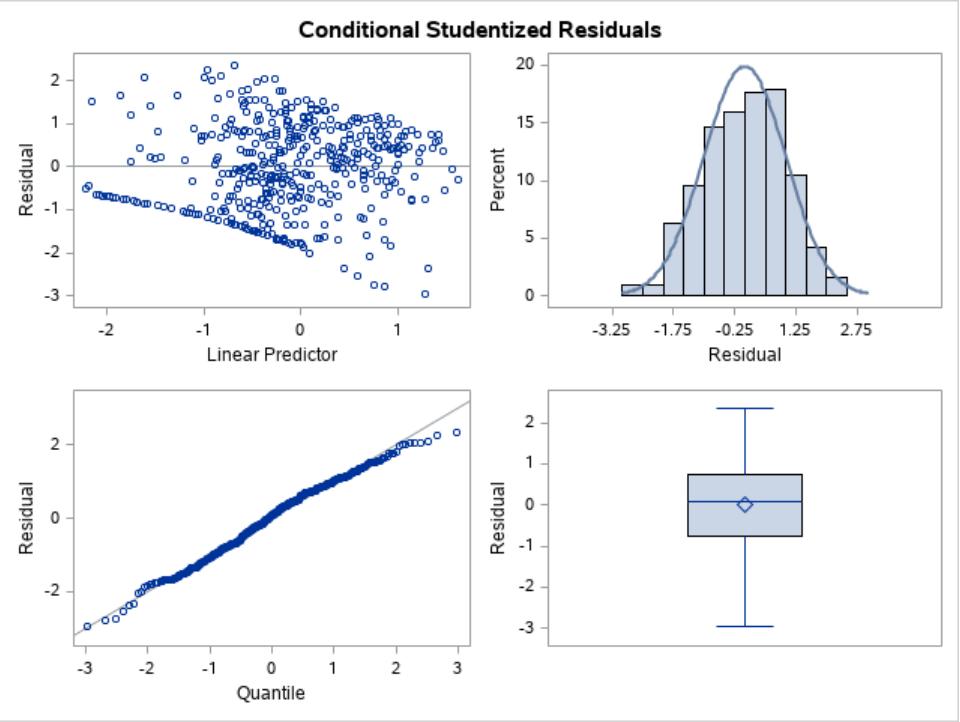
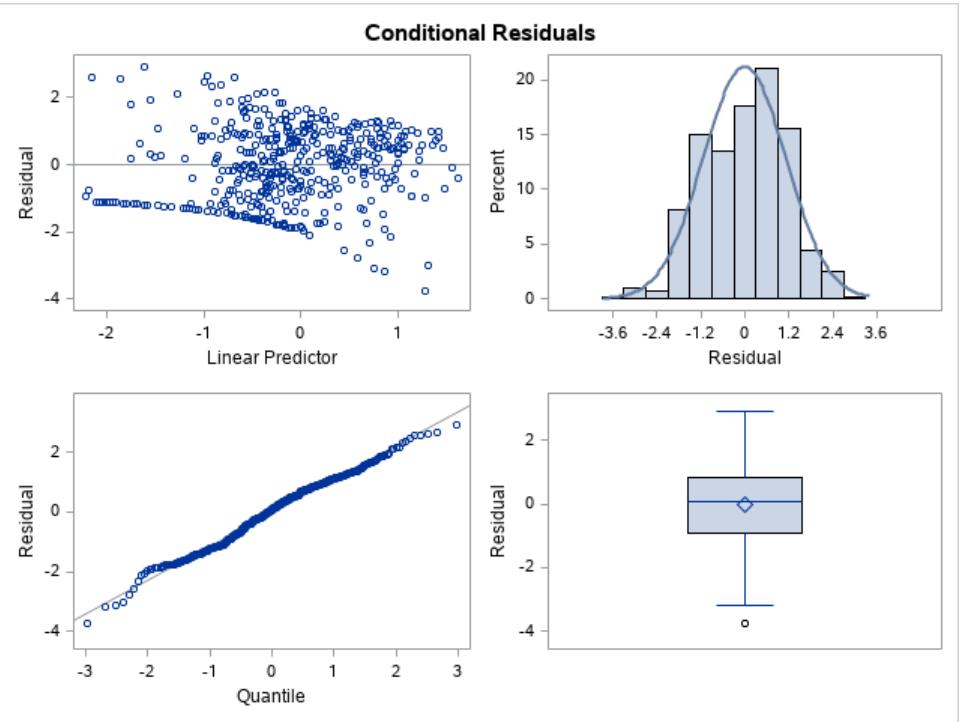
Convergence criterion (PCONV=1.11022E-8) satisfied.

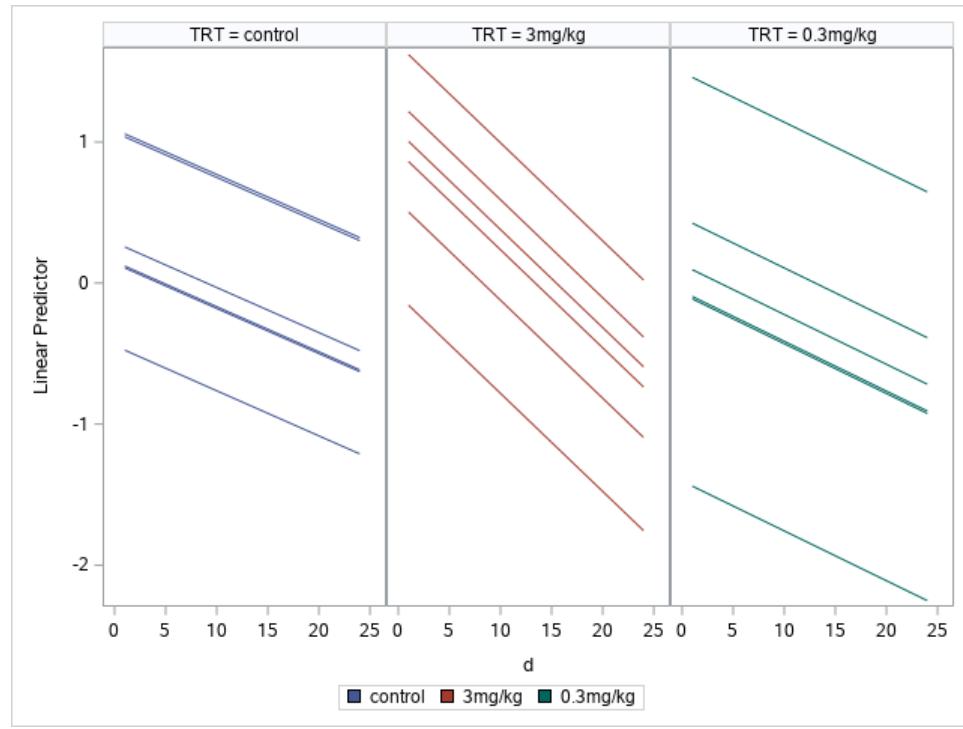
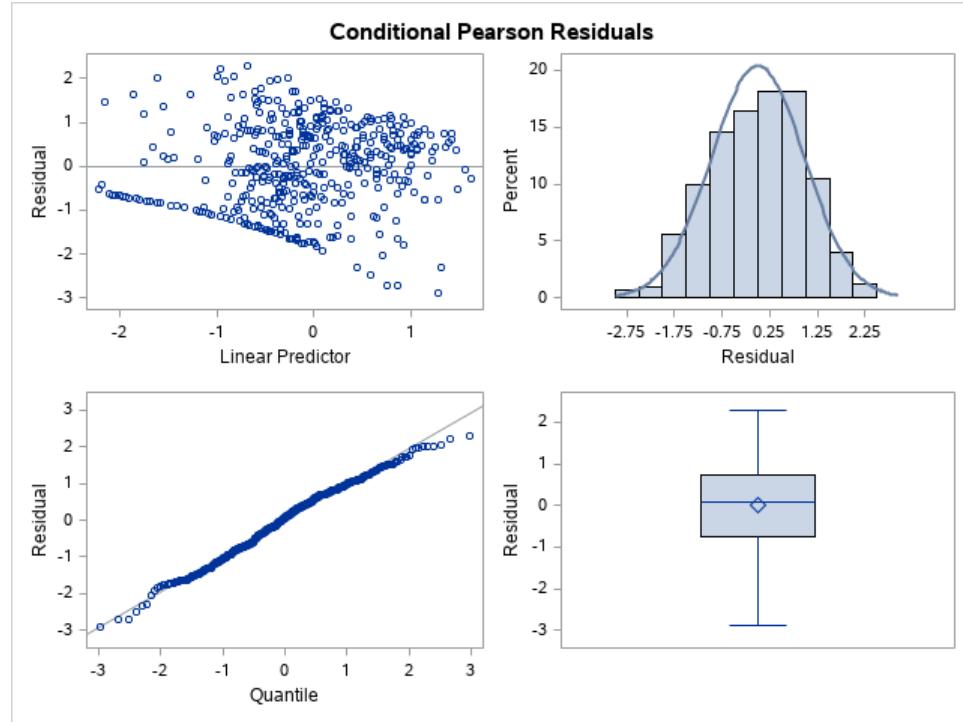
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1403.04
Generalized Chi-Square	124.00
Gener. Chi-Square / DF	0.29

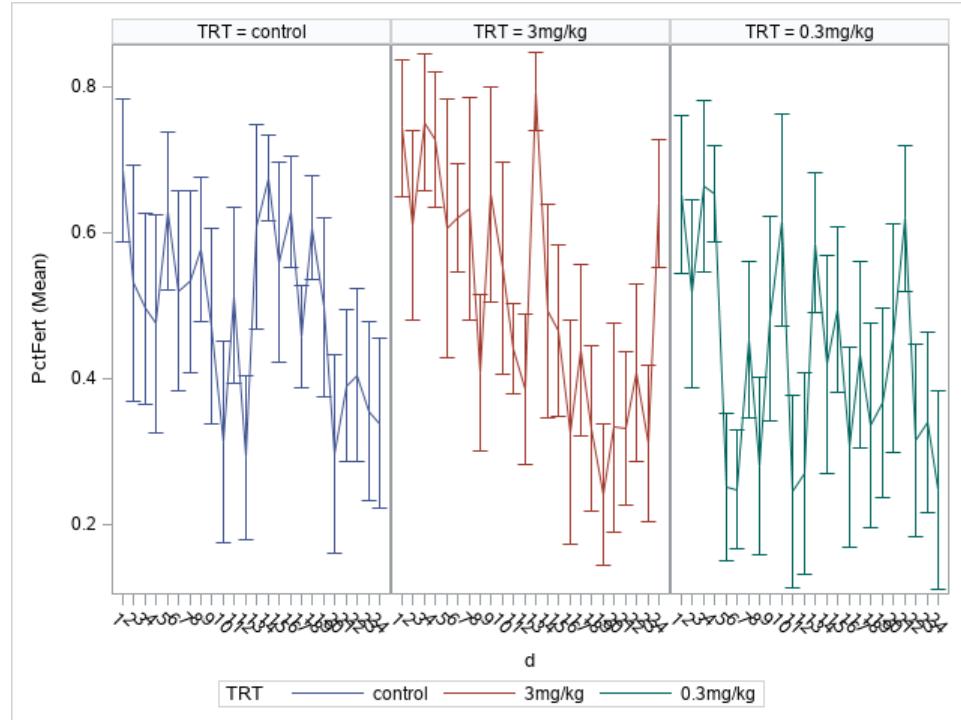
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.5876	0.2408
t	TNK	0.2918	.
Scale		0.01360	0.07086

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.3822	0.3676	15	1.04	0.3149
TRT	0.3mg/kg	-0.2920	0.5229	410	-0.56	0.5770
TRT	3mg/kg	0.5285	0.5228	410	1.01	0.3126
TRT	control	0
d		-0.03196	0.01353	410	-2.36	0.0186
d*TRT	0.3mg/kg	-0.00334	0.01966	410	-0.17	0.8652
d*TRT	3mg/kg	-0.03751	0.01950	410	-1.92	0.0551
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	410	2.50	1.25	0.2860	0.2871
d	1	410	32.03	32.03	<.0001	<.0001
d*TRT	2	410	4.42	2.21	0.1095	0.1108







The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information					
Optimization Technique	Newton-Raphson with Ridging				
Parameters in Optimization	3				
Lower Boundaries	3				
Upper Boundaries	0				
Fixed Effects	Profiled				
Starting From	Data				

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	8	1037.4680633	2.0000000	2.757E-6
1	1	5	1.340781E154	1.94359092	308.3547

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
2	0	0	1183.3517438	.	402.9458
3	0	5	1180.8492041	1.93532749	6.427E-6
4	0	4	1191.6818994	0.28371134	8.057E-9
5	0	2	1198.3847049	1.75011165	0.000013
6	0	1	1198.4265508	0.02822286	4.746E-6
7	0	1	1198.4260356	0.00000759	4.7E-10
8	0	1	1198.4260443	0.00000018	1.33E-10
9	0	0	1198.4260429	0.00000000	3.502E-7

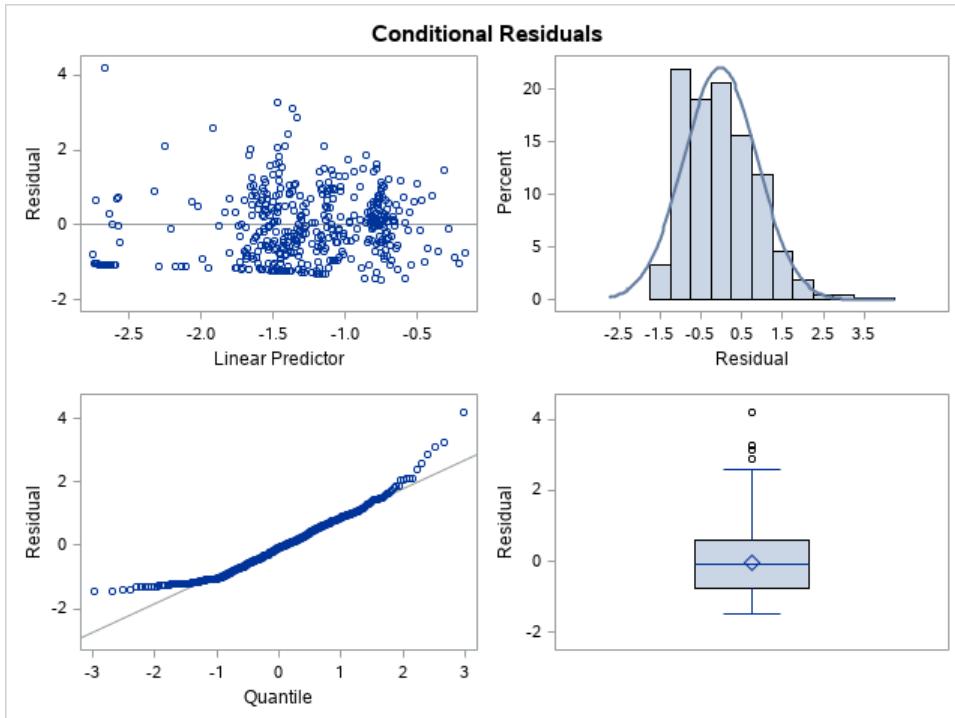
Convergence criterion (PCONV=1.11022E-8) satisfied.

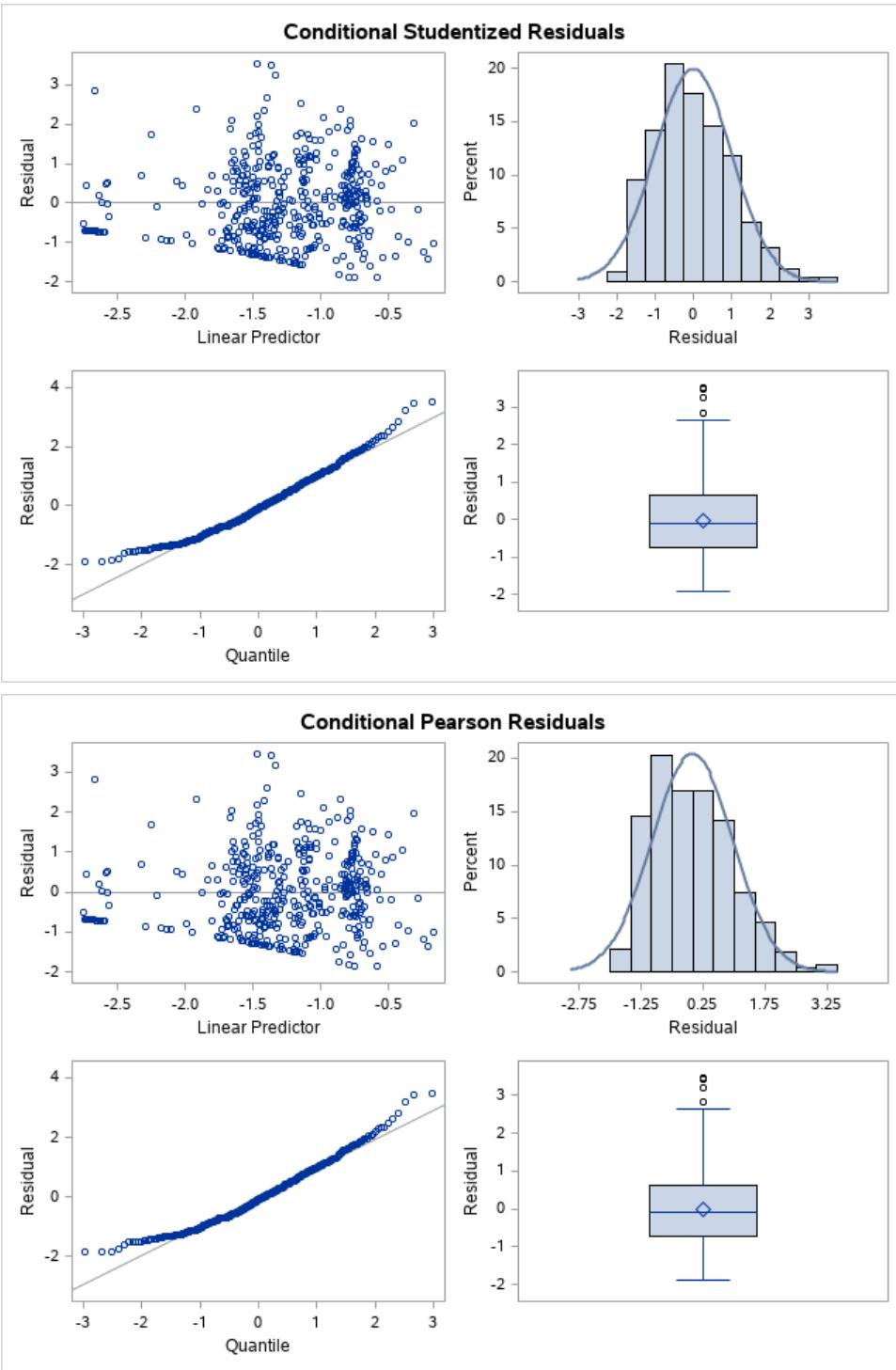
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1198.43
Generalized Chi-Square	57.60
Gener. Chi-Square / DF	0.14

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.2762	0.1209
t	TNK	0.1355	.
Scale		0.000800	0.07006

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.1003	0.2608	15	-4.22	0.0007
TRT	0.3mg/kg	-0.3155	0.3753	410	-0.84	0.4011
TRT	3mg/kg	0.4363	0.3665	410	1.19	0.2346
TRT	control	0
d		-0.00518	0.01044	410	-0.50	0.6201
d*TRT	0.3mg/kg	-0.00349	0.01552	410	-0.23	0.8221
d*TRT	3mg/kg	-0.03238	0.01479	410	-2.19	0.0292
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	410	4.12	2.06	0.1273	0.1286
d	1	410	7.54	7.54	0.0060	0.0063
d*TRT	2	410	5.65	2.82	0.0594	0.0605





The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

The GLIMMIX Procedure

Model Information	
Data Set	WORK.ANASTROZOLEL
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.3mg/kg 3mg/kg control

Number of Observations Read	432
Number of Observations Used	431

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	8	1037.4680633	2.0000000	2.757E-6
1	1	5	1.340781E154	1.94359092	308.3547
2	0	0	1183.3517438	.	402.9458
3	0	5	1180.8492041	1.93532749	6.427E-6
4	0	4	1191.6818994	0.28371134	8.057E-9
5	0	2	1198.3847049	1.75011165	0.000013
6	0	1	1198.4265508	0.02822286	4.746E-6
7	0	1	1198.4260356	0.00000759	4.7E-10
8	0	1	1198.426043	0.00000018	1.33E-10
9	0	0	1198.4260429	0.00000000	3.502E-7

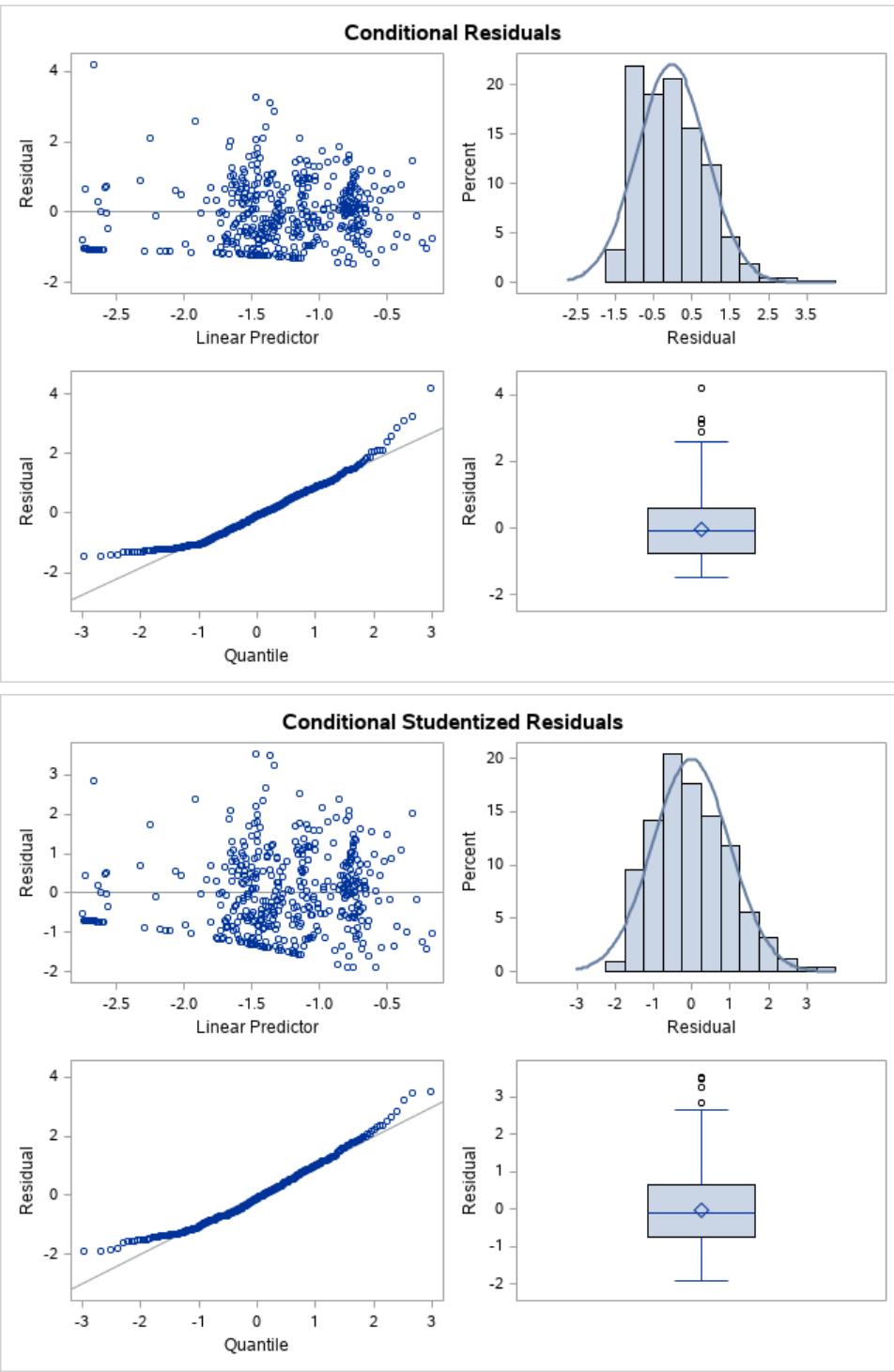
Convergence criterion (PCONV=1.11022E-8) satisfied.

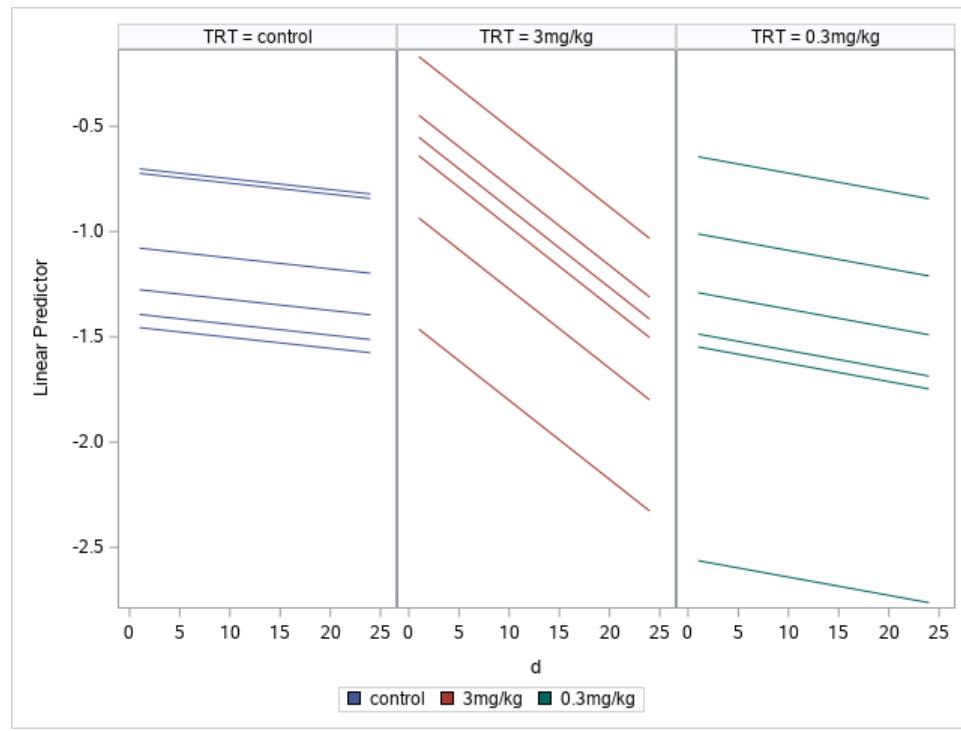
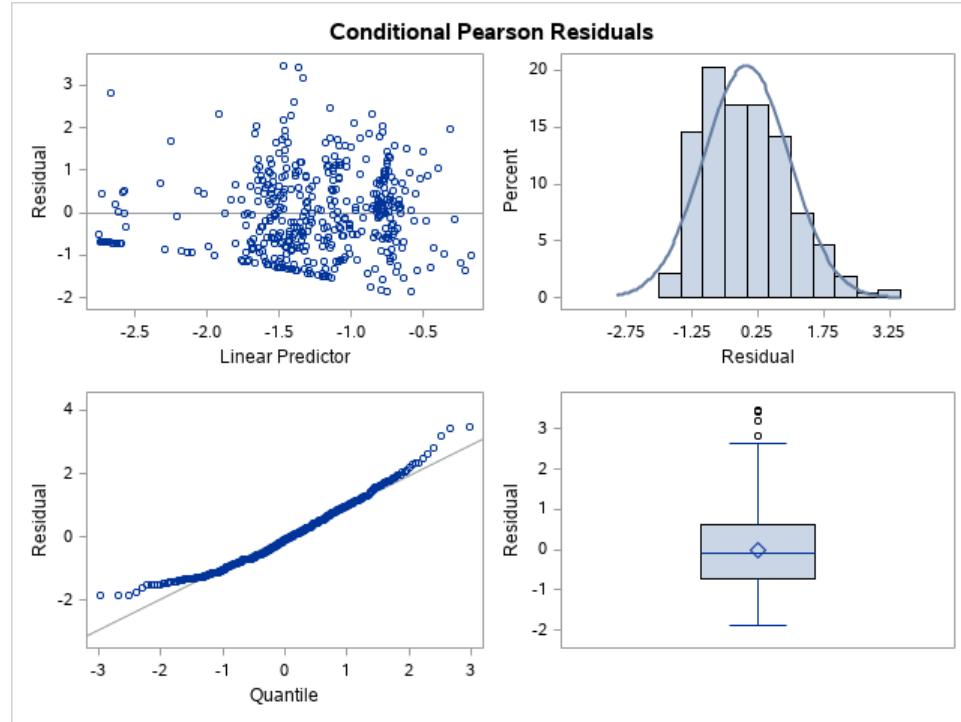
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1198.43
Generalized Chi-Square	57.60
Gener. Chi-Square / DF	0.14

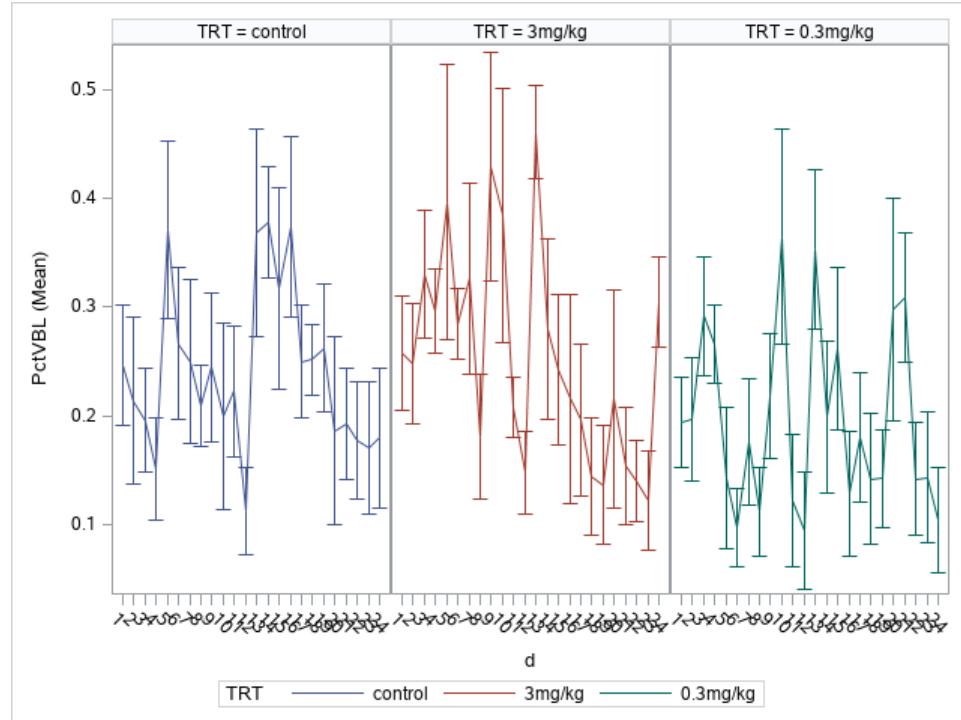
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.2762	0.1209
t	TNK	0.1355	.
Scale		0.000800	0.07006

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.1003	0.2608	15	-4.22	0.0007
TRT	0.3mg/kg	-0.3155	0.3753	410	-0.84	0.4011
TRT	3mg/kg	0.4363	0.3665	410	1.19	0.2346
TRT	control	0
d		-0.00518	0.01044	410	-0.50	0.6201
d*TRT	0.3mg/kg	-0.00349	0.01552	410	-0.23	0.8221
d*TRT	3mg/kg	-0.03238	0.01479	410	-2.19	0.0292
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	410	4.12	2.06	0.1273	0.1286
d	1	410	7.54	7.54	0.0060	0.0063
d*TRT	2	410	5.65	2.82	0.0594	0.0605







The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	Eggs_gFem
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information					
Optimization Technique	Dual Quasi-Newton				
Parameters in Optimization	1				
Lower Boundaries	1				
Upper Boundaries	0				
Fixed Effects	Profiled				
Residual Variance	Profiled				
Starting From	Data				

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4008.2670046	.	2.66E-14

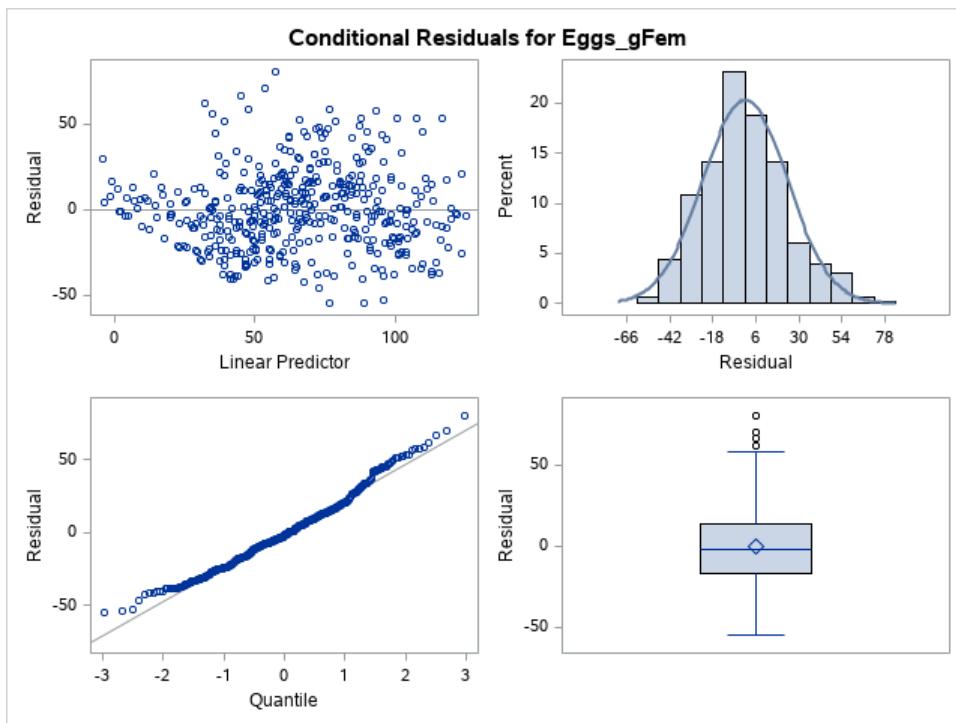
Convergence criterion (ABSGCONV=0.00001) satisfied.

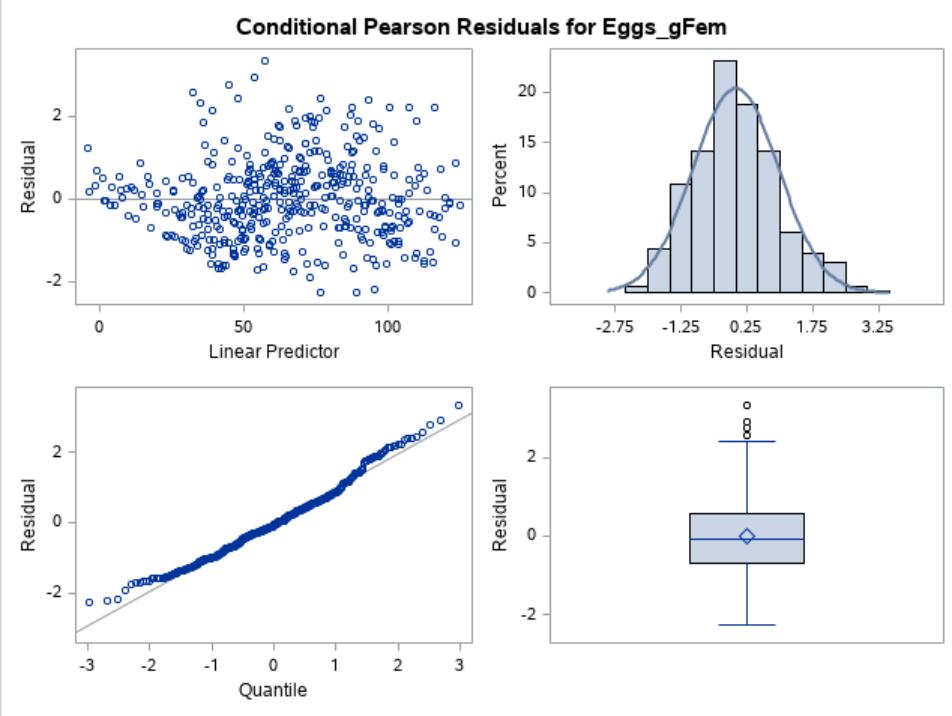
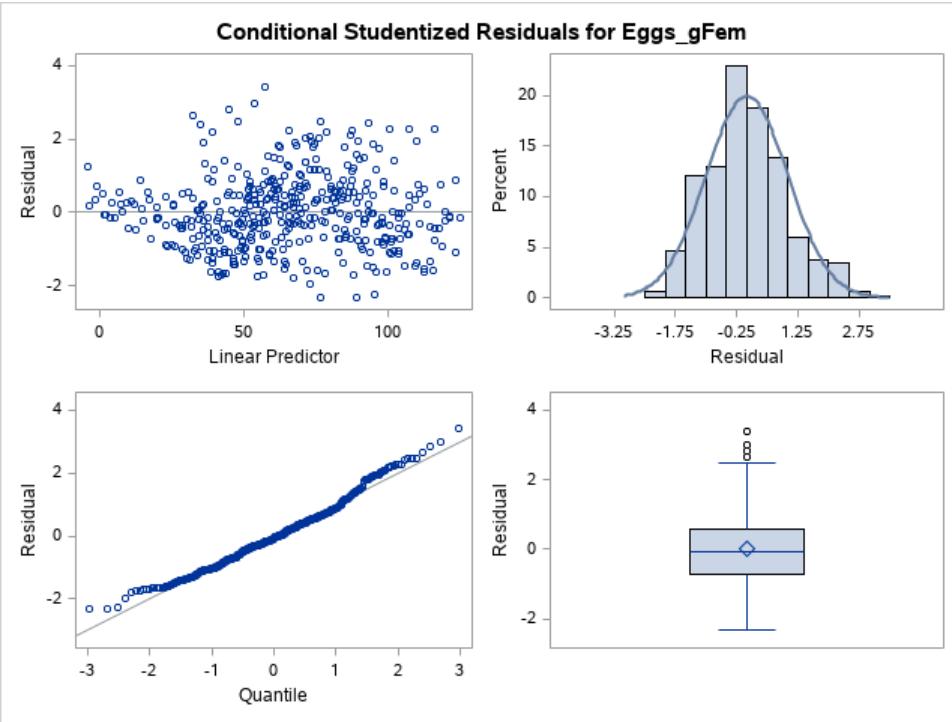
Fit Statistics	
-2 Res Log Likelihood	4008.27
AIC (smaller is better)	4012.27
AICC (smaller is better)	4012.30
BIC (smaller is better)	4014.05
CAIC (smaller is better)	4016.05
HQIC (smaller is better)	4012.51
Generalized Chi-Square	247289.8
Gener. Chi-Square / DF	580.49

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	526.95	201.26
Residual (VC)		580.49	40.4940

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		96.2125	10.2470	15	9.39	<.0001
TRT	0.075ug	6.4480	14.4915	411	0.44	0.6566
TRT	0.75ug/	-8.4105	14.4915	411	-0.58	0.5620
TRT	control	0
d		-1.7677	0.2901	411	-6.09	<.0001
d*TRT	0.075ug	-1.1808	0.4102	411	-2.88	0.0042
d*TRT	0.75ug/	-0.9297	0.4102	411	-2.27	0.0239
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	1.06	0.53	0.5894	0.5898
d	1	411	217.76	217.76	<.0001	<.0001
d*TRT	2	411	9.20	4.60	0.0101	0.0106





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1752.2429663	.	2.84E-14

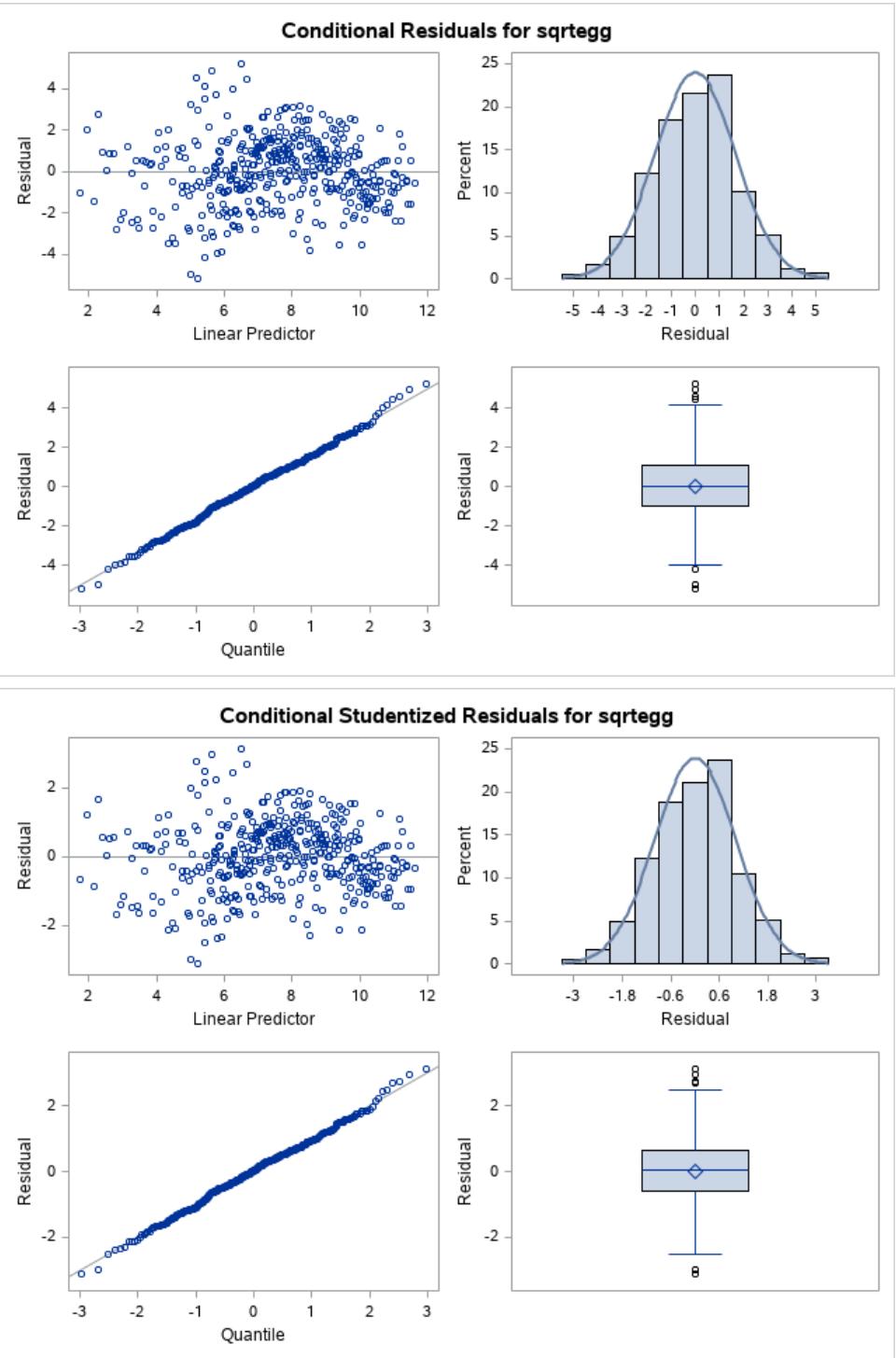
Convergence criterion (ABSGCONV=0.00001) satisfied.

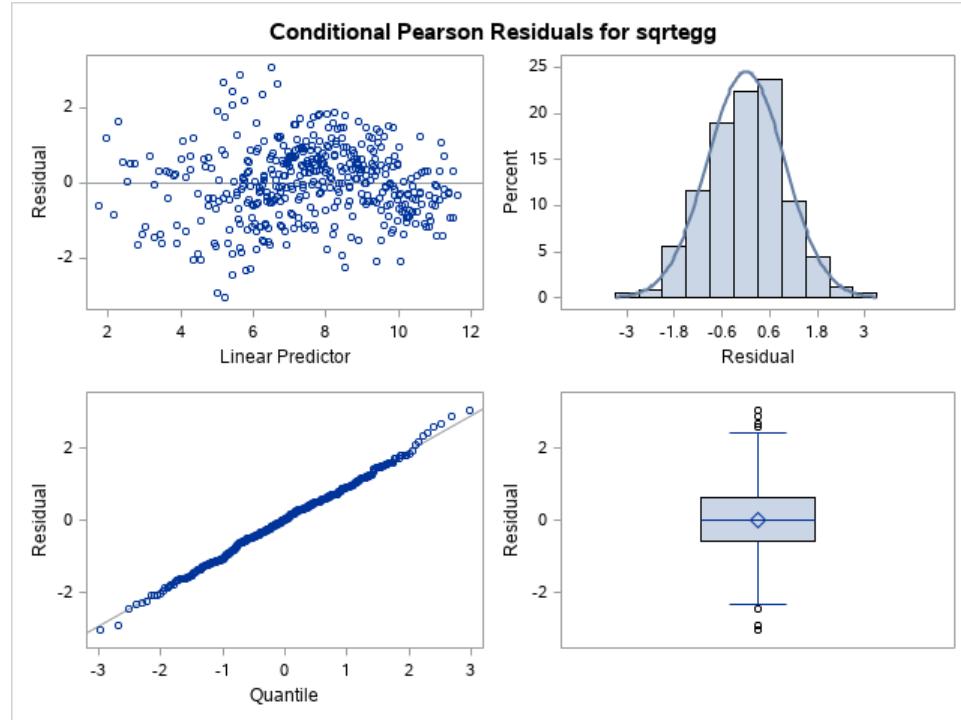
Fit Statistics	
-2 Res Log Likelihood	1752.24
AIC (smaller is better)	1756.24
AICC (smaller is better)	1756.27
BIC (smaller is better)	1758.02
CAIC (smaller is better)	1760.02
HQIC (smaller is better)	1756.49
Generalized Chi-Square	1236.83
Gener. Chi-Square / DF	2.90

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	2.8117	1.0709
Residual (VC)		2.9033	0.2025

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.8116	0.7447	15	13.18	<.0001
TRT	0.075ug	0.4828	1.0531	411	0.46	0.6469
TRT	0.75ug/	-0.4171	1.0531	411	-0.40	0.6923
TRT	control	0
d		-0.1253	0.02051	411	-6.11	<.0001
d*TRT	0.075ug	-0.07411	0.02901	411	-2.55	0.0110
d*TRT	0.75ug/	-0.09175	0.02901	411	-3.16	0.0017
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.73	0.37	0.6937	0.6939
d	1	411	232.62	232.62	<.0001	<.0001
d*TRT	2	411	11.27	5.63	0.0036	0.0039





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1752.2429663	.	4.01E-13

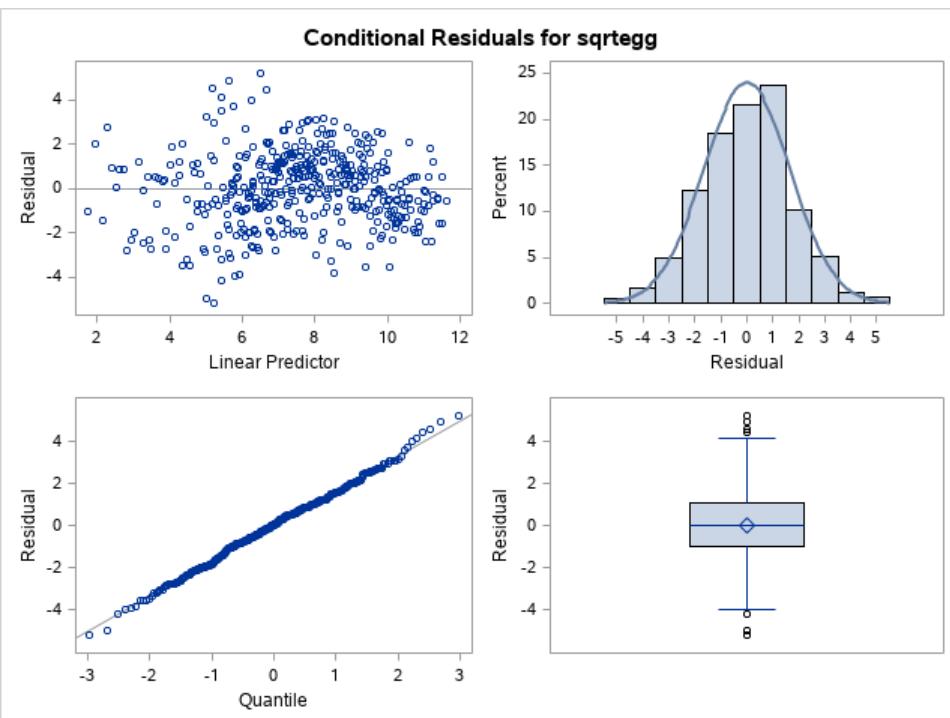
Convergence criterion (ABSGCONV=0.00001) satisfied.

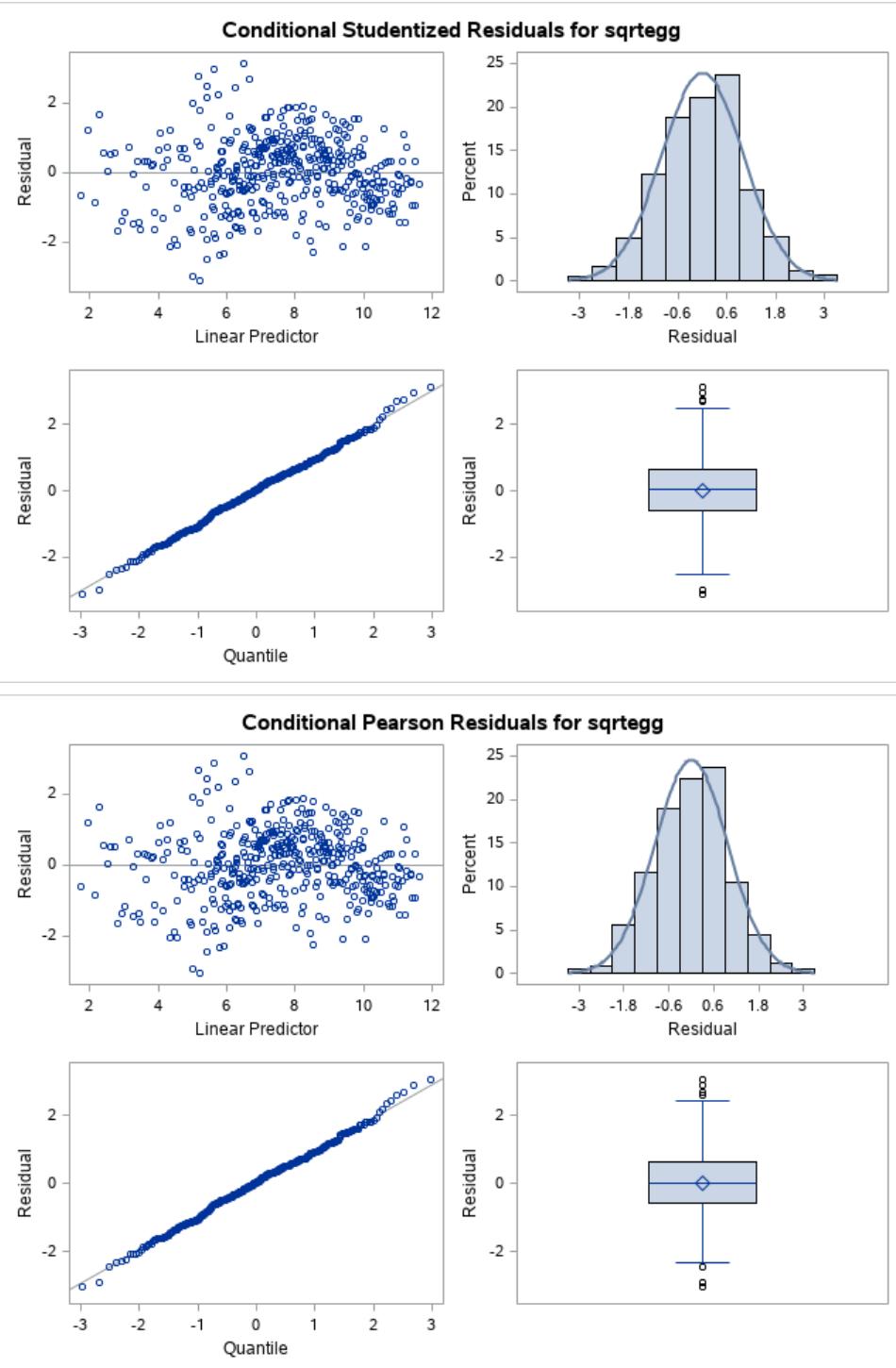
Fit Statistics	
-2 Res Log Likelihood	1752.24
AIC (smaller is better)	1758.24
AICC (smaller is better)	1758.30
BIC (smaller is better)	1760.91
CAIC (smaller is better)	1763.91
HQIC (smaller is better)	1758.61
Generalized Chi-Square	1236.83
Gener. Chi-Square / DF	2.90

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	2.8117	1.0709
CS	TNK	0	.
Residual		2.9033	0.2025

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.8116	0.7447	15	13.18	<.0001
TRT	0.075ug	0.4828	1.0531	411	0.46	0.6469
TRT	0.75ug/	-0.4171	1.0531	411	-0.40	0.6923
TRT	control	0
d		-0.1253	0.02051	411	-6.11	<.0001
d*TRT	0.075ug	-0.07411	0.02901	411	-2.55	0.0110
d*TRT	0.75ug/	-0.09175	0.02901	411	-3.16	0.0017
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.73	0.37	0.6937	0.6939
d	1	411	232.62	232.62	<.0001	<.0001
d*TRT	2	411	11.27	5.63	0.0036	0.0039





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	2
Upper Boundaries	1
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	1830.505388	.	391.983
1	0	2	1717.9741999	112.53118804	60.84691
2	0	2	1715.6016041	2.37259589	9.634794
3	0	2	1715.5416406	0.05996347	0.126781
4	0	4	1715.5413622	0.00027842	0.290636
5	0	2	1715.541281	0.00008116	0.089719
6	0	3	1715.5412726	0.00000844	0.000037

Convergence criterion (GCONV=1E-8) satisfied.

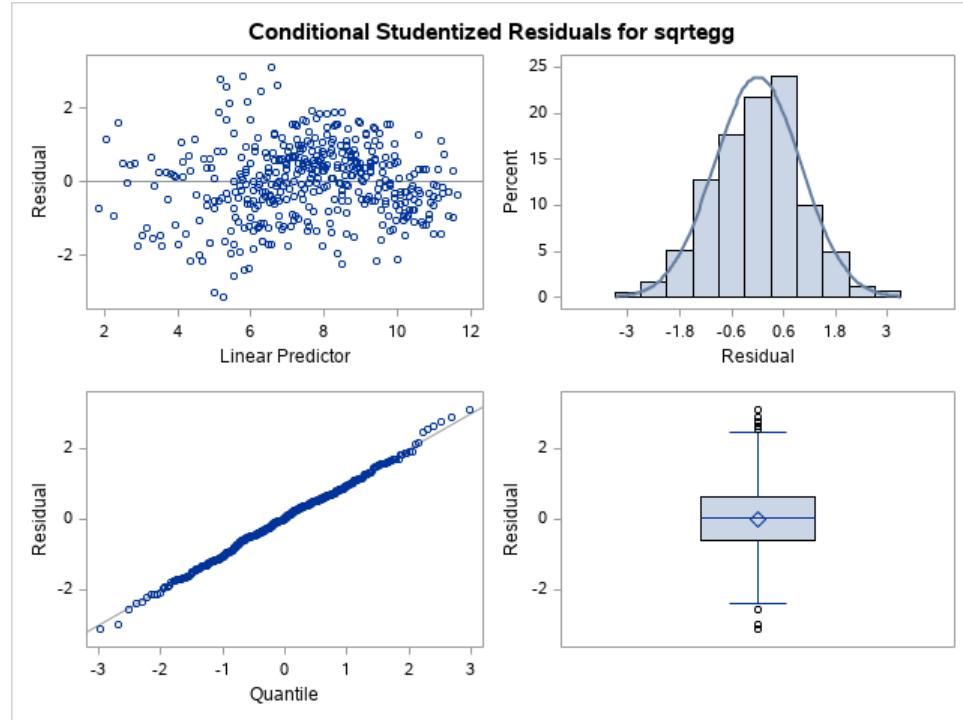
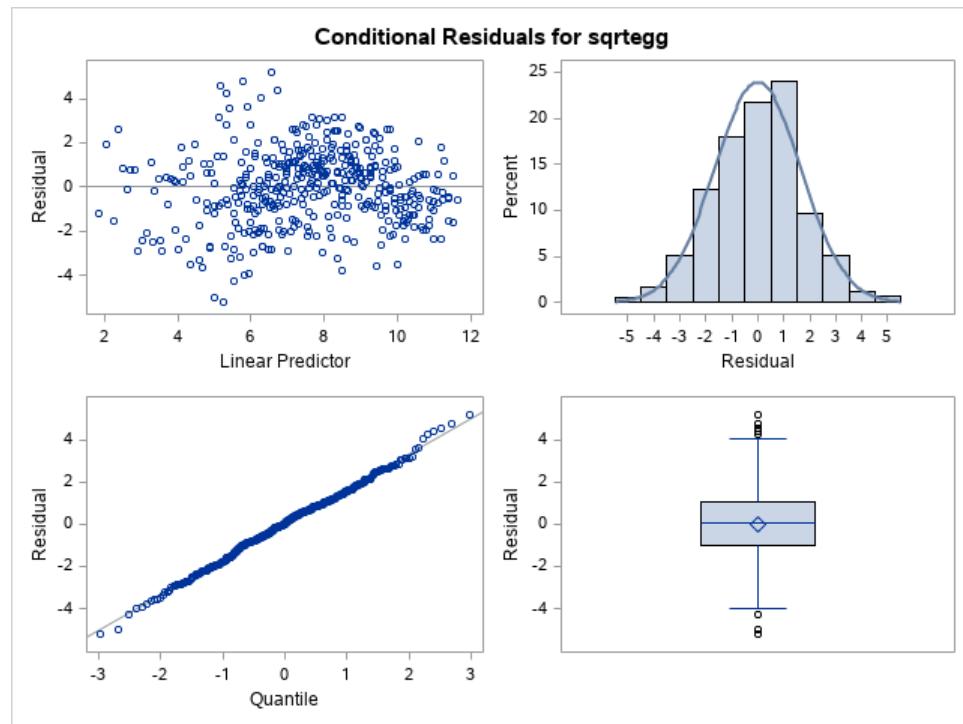
Fit Statistics	
-2 Res Log Likelihood	1715.54
AIC (smaller is better)	1721.54
AICC (smaller is better)	1721.60
BIC (smaller is better)	1724.21
CAIC (smaller is better)	1727.21
HQIC (smaller is better)	1721.91
Generalized Chi-Square	1291.31
Gener. Chi-Square / DF	3.03

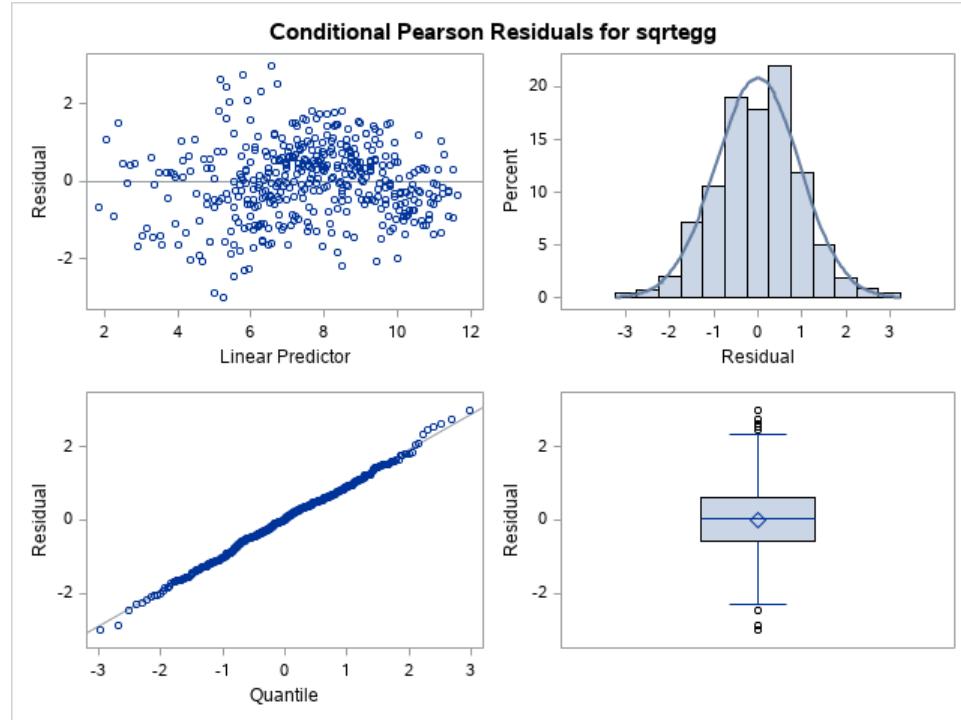
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	2.7090	1.0743
AR(1)	TNK	0.3105	0.05122
Residual		3.0312	0.2447

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.9002	0.7790	15	12.71	<.0001
TRT	0.075ug	0.4053	1.1017	411	0.37	0.7132
TRT	0.75ug/	-0.4759	1.1017	411	-0.43	0.6660
TRT	control	0
d		-0.1324	0.02734	411	-4.84	<.0001
d*TRT	0.075ug	-0.06829	0.03867	411	-1.77	0.0782
d*TRT	0.75ug/	-0.08559	0.03867	411	-2.21	0.0274
d*TRT	control	0

Type III Tests of Fixed Effects					
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.64	0.32	0.7257	0.7259
d	1	411	135.40	135.40	<.0001	<.0001
d*TRT	2	411	5.48	2.74	0.0646	0.0658





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	sqrtegg
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	2
Upper Boundaries	1
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient

Iteration History						
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient	
0	0	4	1830.505388		391.983	
1	0	2	1717.9741999	112.53118804	60.84691	
2	0	2	1715.6016041	2.37259589	9.634794	
3	0	2	1715.5416406	0.05996347	0.126781	
4	0	4	1715.5413622	0.00027842	0.290636	
5	0	2	1715.541281	0.00008116	0.089719	
6	0	3	1715.5412726	0.00000844	0.000037	

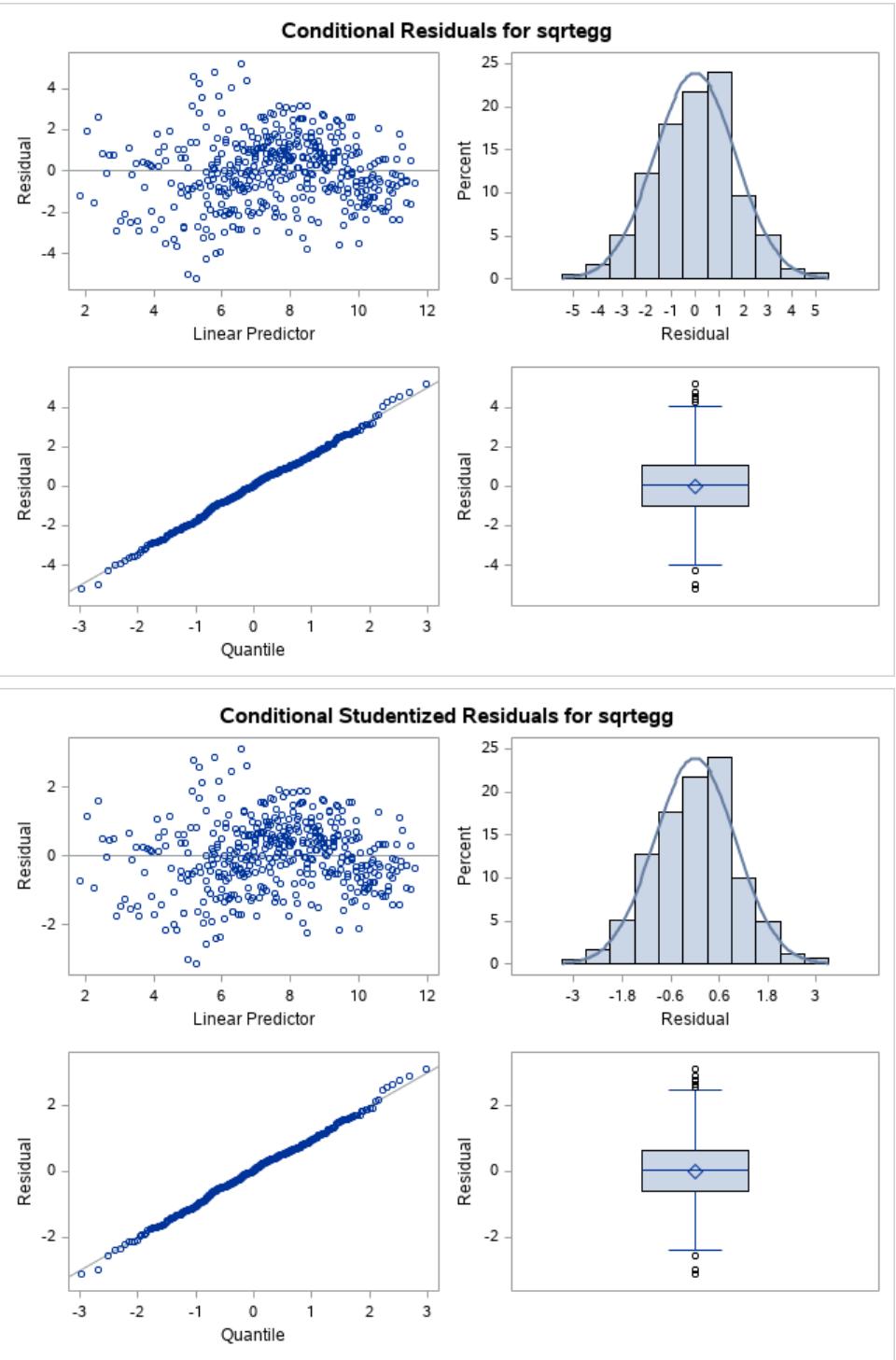
Convergence criterion (GCONV=1E-8) satisfied.

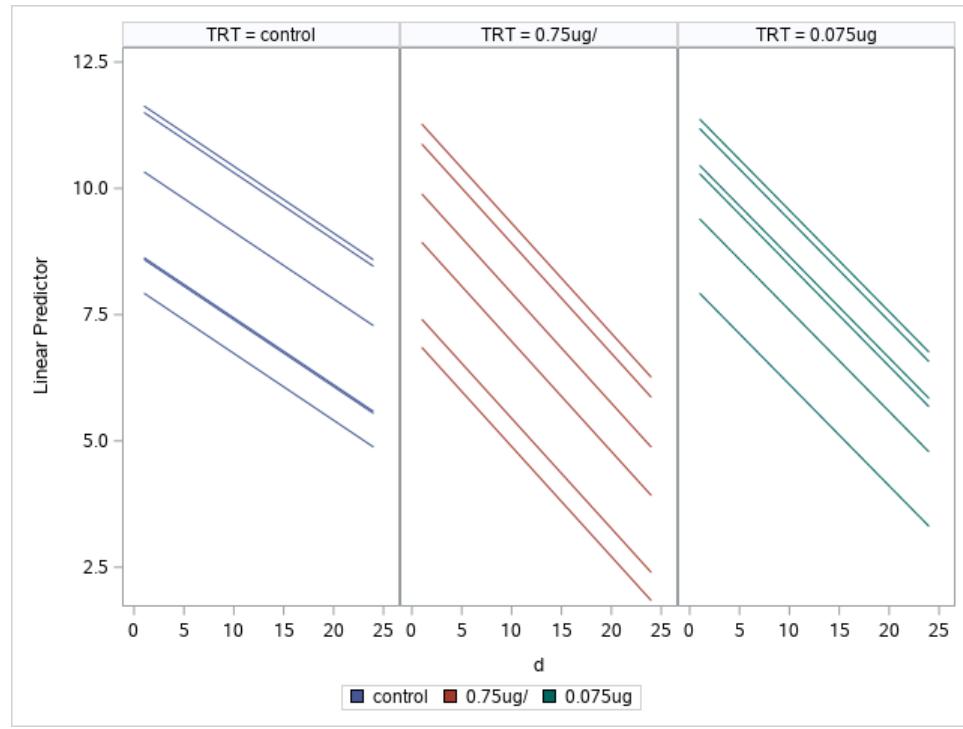
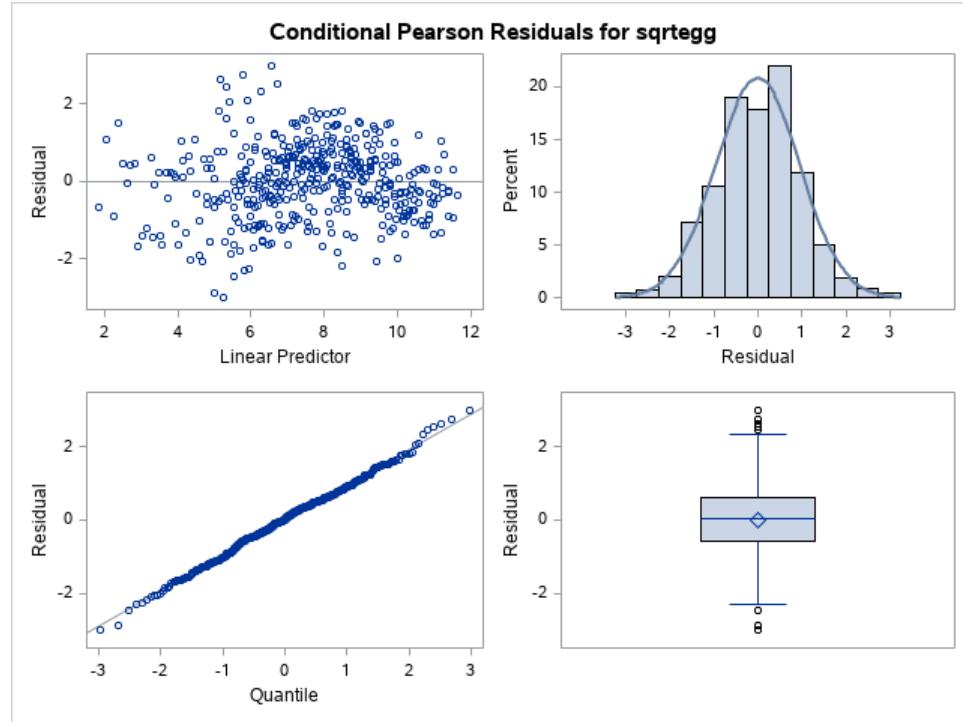
Fit Statistics	
-2 Res Log Likelihood	1715.54
AIC (smaller is better)	1721.54
AICC (smaller is better)	1721.60
BIC (smaller is better)	1724.21
CAIC (smaller is better)	1727.21
HQIC (smaller is better)	1721.91
Generalized Chi-Square	1291.31
Gener. Chi-Square / DF	3.03

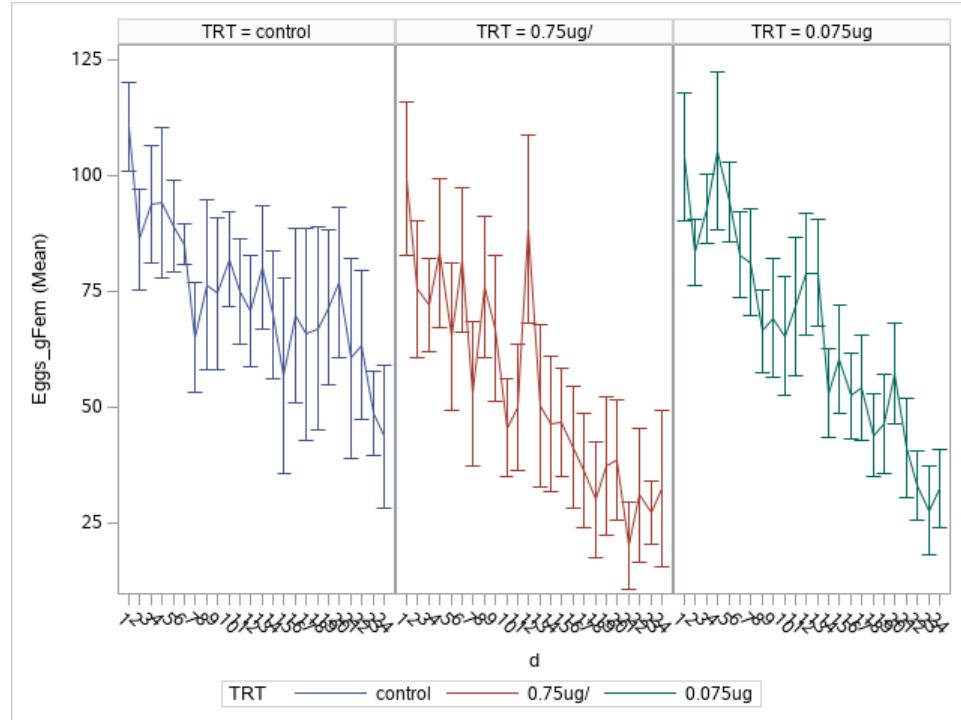
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	2.7090	1.0743
AR(1)	TNK	0.3105	0.05122
Residual		3.0312	0.2447

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		9.9002	0.7790	15	12.71	<.0001
TRT	0.075ug	0.4053	1.1017	411	0.37	0.7132
TRT	0.75ug/	-0.4759	1.1017	411	-0.43	0.6660
TRT	control	0
d		-0.1324	0.02734	411	-4.84	<.0001
d*TRT	0.075ug	-0.06829	0.03867	411	-1.77	0.0782
d*TRT	0.75ug/	-0.08559	0.03867	411	-2.21	0.0274
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.64	0.32	0.7257	0.7259
d	1	411	135.40	135.40	<.0001	<.0001
d*TRT	2	411	5.48	2.74	0.0646	0.0658







The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	2	1.340781E154	2.00000000	1093.629
1	0	0	1283.996614	.	1250.599

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
2	0	5	1237.2486328	1.92595031	0.000064
3	0	7	1319.8121202	0.86400745	2.902E-6
4	0	4	1344.0716666	0.76802930	0.001469
5	0	2	1345.3603927	0.83058577	1.796E-7
6	0	1	1345.3412381	0.00470890	2.504E-6
7	0	1	1345.341772	0.00002694	5.447E-9
8	0	1	1345.3417085	0.00000056	1.04E-7
9	0	0	1345.3417088	0.00000000	4.916E-7

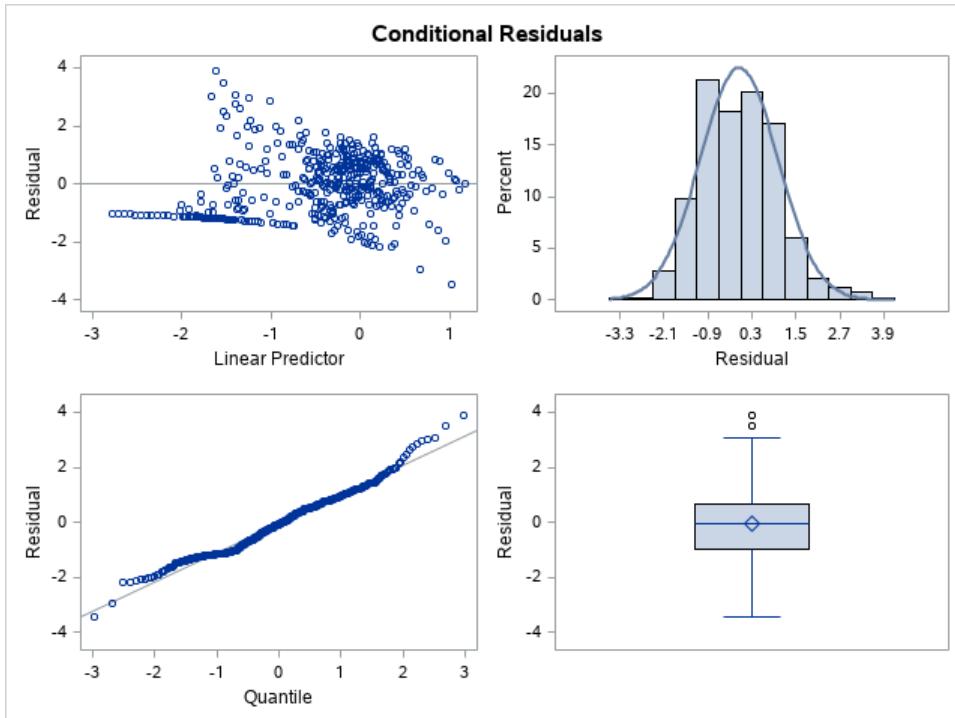
Convergence criterion (PCONV=1.11022E-8) satisfied.

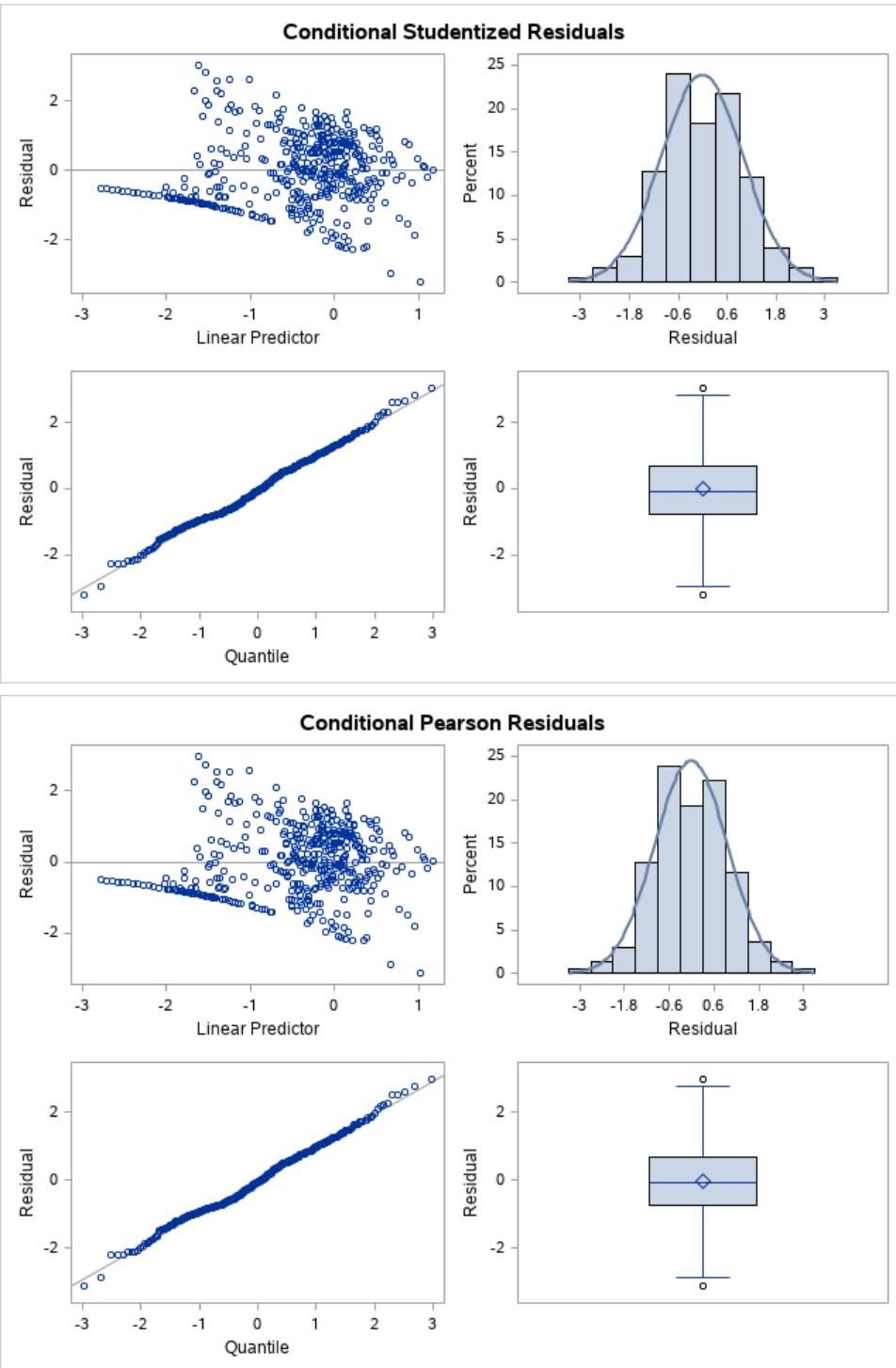
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1345.34
Generalized Chi-Square	100.75
Gener. Chi-Square / DF	0.24

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.6395	0.2570
t	TNK	0.2365	0.01651
Scale		0.001369	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.1506	0.3686	15	0.41	0.6887
TRT	0.075ug	-0.4062	0.5247	411	-0.77	0.4393
TRT	0.75ug/	0.09879	0.5261	411	0.19	0.8511
TRT	control	0
d		-0.03220	0.01211	411	-2.66	0.0081
d*TRT	0.075ug	0.003995	0.01766	411	0.23	0.8212
d*TRT	0.75ug/	-0.02973	0.01804	411	-1.65	0.1001
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	1.03	0.51	0.5986	0.5990
d	1	411	30.49	30.49	<.0001	<.0001
d*TRT	2	411	3.95	1.97	0.1390	0.1404





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Class Level Information		
Class	Levels	Values
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	4	1203.5078407	2.0000000	9.590111
1	1	4	1.340781E154	2.0000000	.
2	0	0	1184.2483738	.	4.712469
3	1	1	1190.5224695	2.0000000	61.22134
4	0	0	1238.9070527	.	81.85057
5	0	10	1230.5068538	1.71750450	5.345676
6	0	2	1233.308195	0.02274313	5.692414
7	0	1	1233.2296805	0.00021997	5.670785
8	0	1	1233.2300794	0.00000527	5.67078
9	0	1	1233.2301108	0.00000007	5.670785
10	0	0	1233.2301107	0.00000000	5.670785

Convergence criterion (PCONV=1.11022E-8) satisfied.

Estimated G matrix is not positive definite.

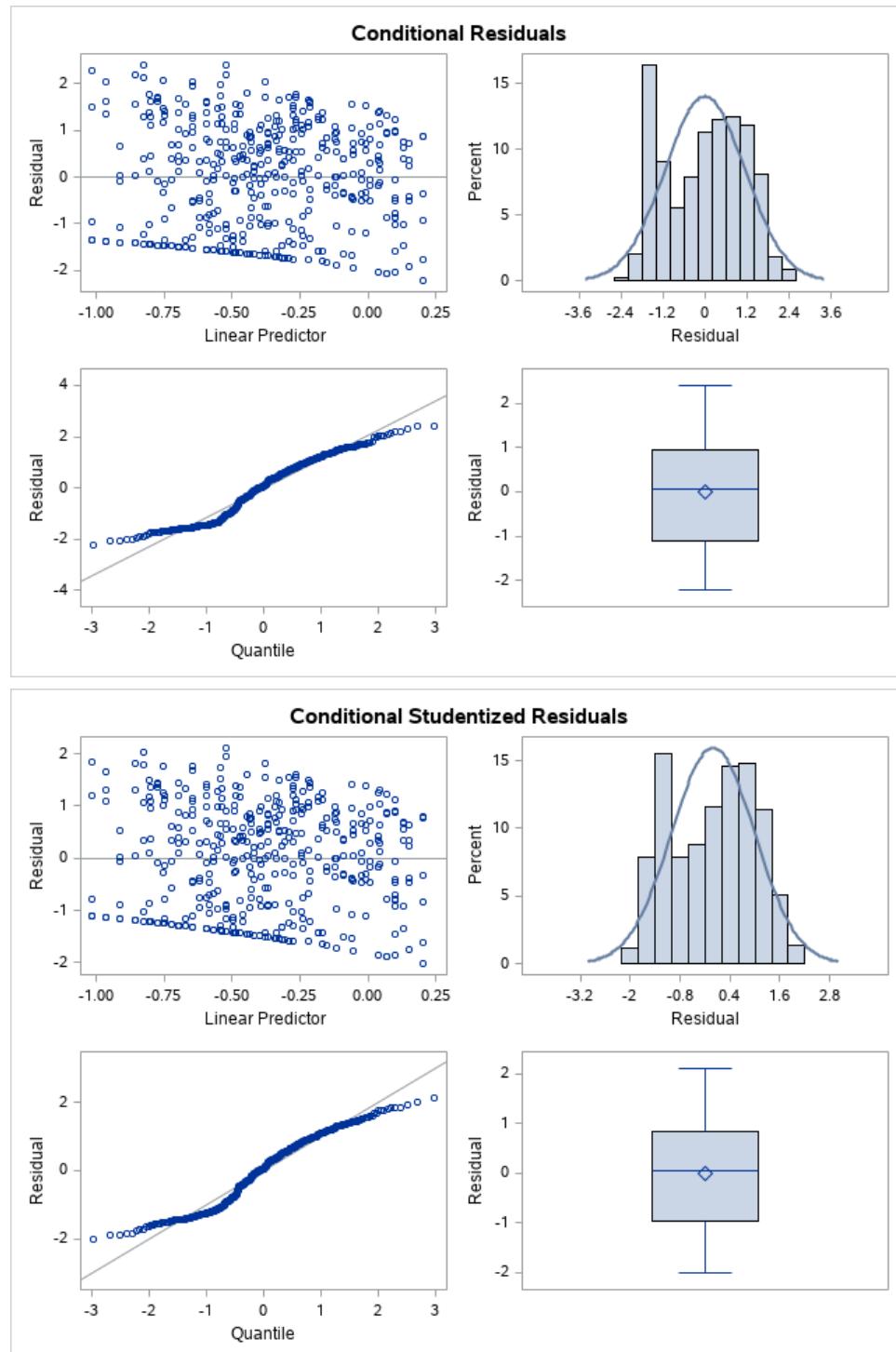
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1233.23
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

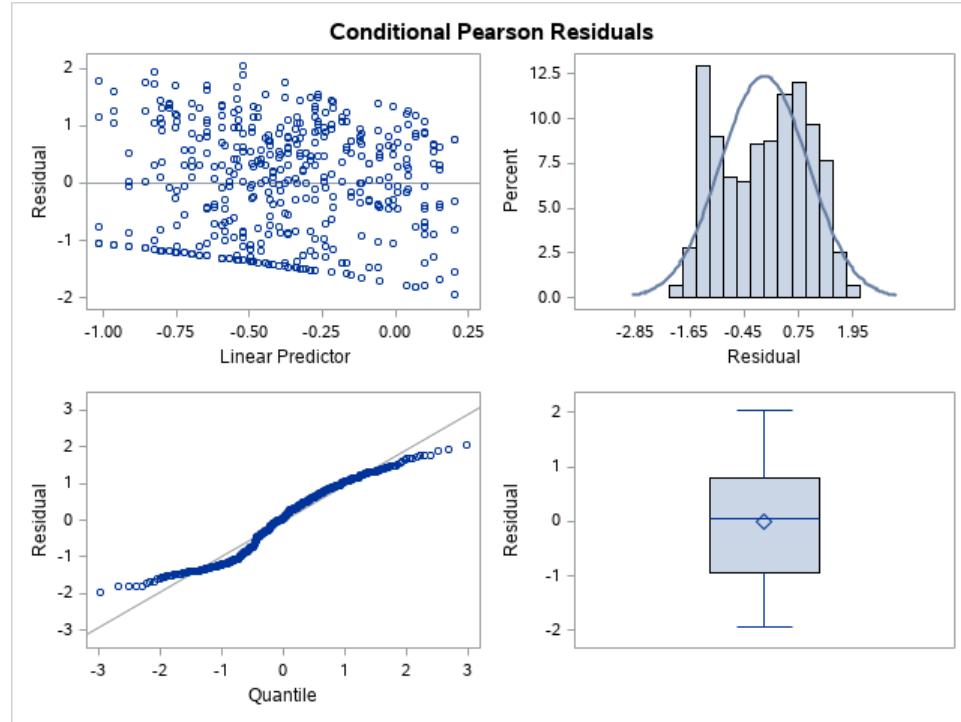
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0	1.8906
Variance	TNK	0.8237	0.06001
CS	TNK	0.4685	1.3854
Scale		2.9963	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.1615	0.3182	15	0.51	0.6192
TRT	0.075ug	-0.3771	0.4521	411	-0.83	0.4047
TRT	0.75ug/	0.09690	0.4471	411	0.22	0.8285
TRT	control	0
d		-0.03114	0.01113	411	-2.80	0.0054
d*TRT	0.075ug	0.005727	0.01596	411	0.36	0.7198
d*TRT	0.75ug/	-0.02205	0.01606	411	-1.37	0.1705
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	1.23	0.62	0.5397	0.5402
d	1	411	30.97	30.97	<.0001	<.0001
d*TRT	2	411	3.25	1.62	0.1971	0.1983





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	4
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	8	1185.344234	2.0000000	6.811E-6

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	5	1282.3271799	1.68261699	0.000207
2	0	4	1314.838286	0.49186077	0.000046
3	0	2	1316.7117879	0.68948685	0.000018
4	0	1	1316.6328675	0.00761650	0.000074
5	0	1	1316.6365088	0.00003454	1.02E-7
6	0	1	1316.6363359	0.00000078	1.516E-9
7	0	1	1316.6363441	0.00000004	7.94E-11
8	0	0	1316.6363437	0.00000000	7.766E-7

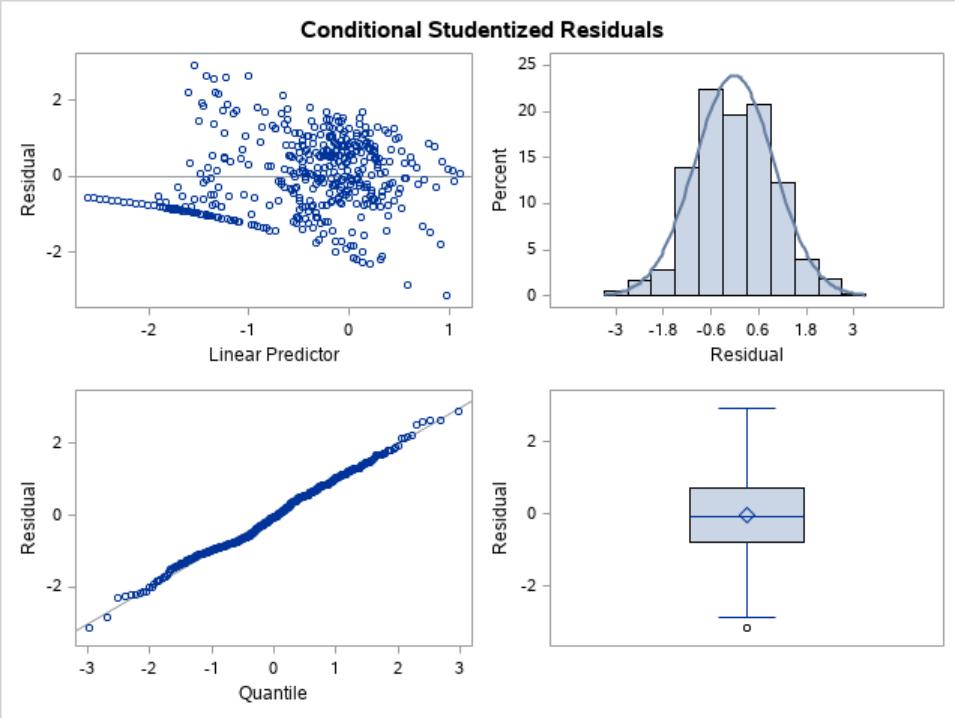
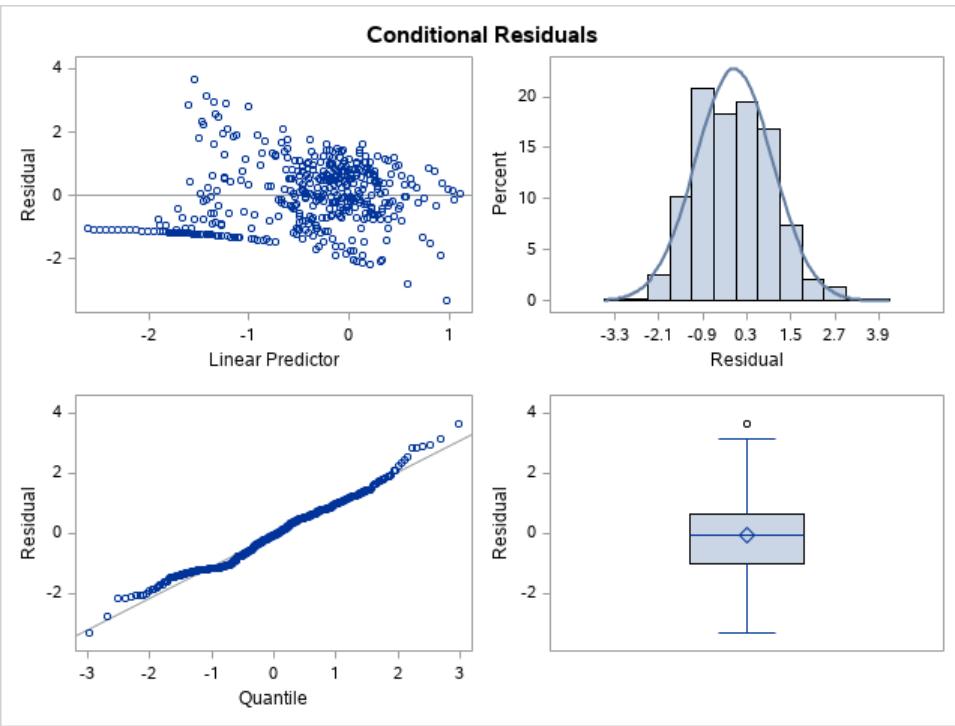
Convergence criterion (PCONV=1.11022E-8) satisfied.

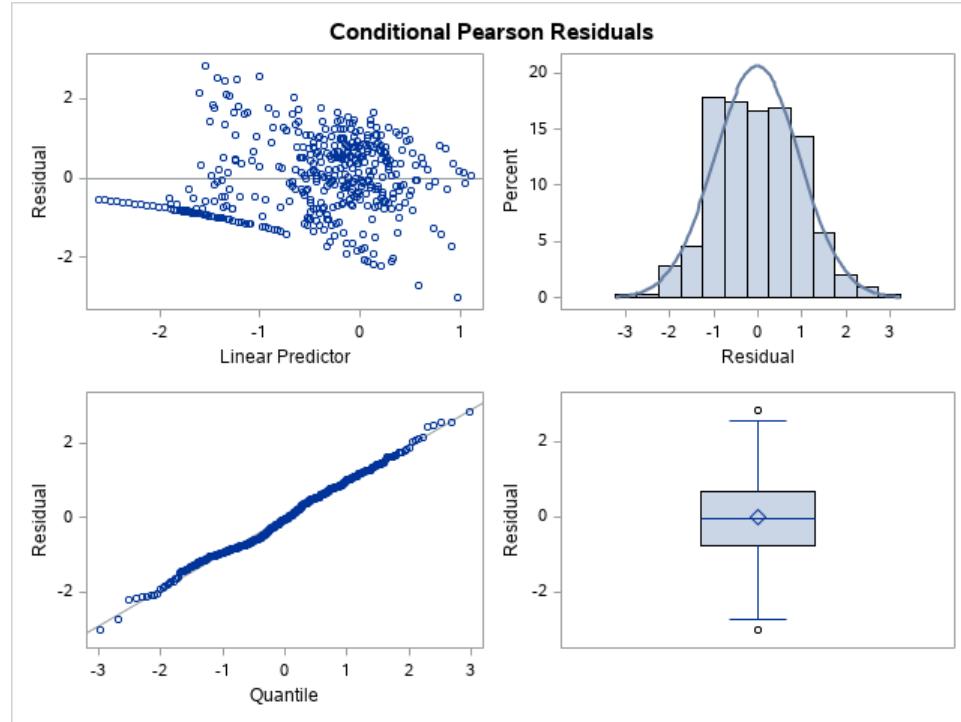
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1316.64
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.5968	0.2529
Variance	TNK	0.2436	.
AR(1)	TNK	0.2205	0.05216
Scale		0.01566	0.07711

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.1642	0.3785	15	0.43	0.6705
TRT	0.075ug	-0.4412	0.5399	411	-0.82	0.4143
TRT	0.75ug/	0.06113	0.5415	411	0.11	0.9102
TRT	control	0
d		-0.03362	0.01475	411	-2.28	0.0231
d*TRT	0.075ug	0.008120	0.02145	411	0.38	0.7052
d*TRT	0.75ug/	-0.02602	0.02188	411	-1.19	0.2350
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	1.01	0.51	0.6021	0.6025
d	1	411	19.56	19.56	<.0001	<.0001
d*TRT	2	411	2.52	1.26	0.2843	0.2854





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctFert
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	4	1203.5078407	2.0000000	9.590111

Iteration History						
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient	
1	1	4	1.340781E154	2.00000000		
2	0	0	1184.2483738		4.712469	
3	1	1	1190.5224695	2.00000000	61.22134	
4	0	0	1238.9070527		81.85057	
5	0	10	1230.5068538	1.71750450	5.345676	
6	0	2	1233.308195	0.02274313	5.692414	
7	0	1	1233.2296805	0.00021997	5.670785	
8	0	1	1233.2300794	0.00000527	5.67078	
9	0	1	1233.2301108	0.00000007	5.670785	
10	0	0	1233.2301107	0.00000000	5.670785	

Convergence criterion (PCONV=1.11022E-8) satisfied.

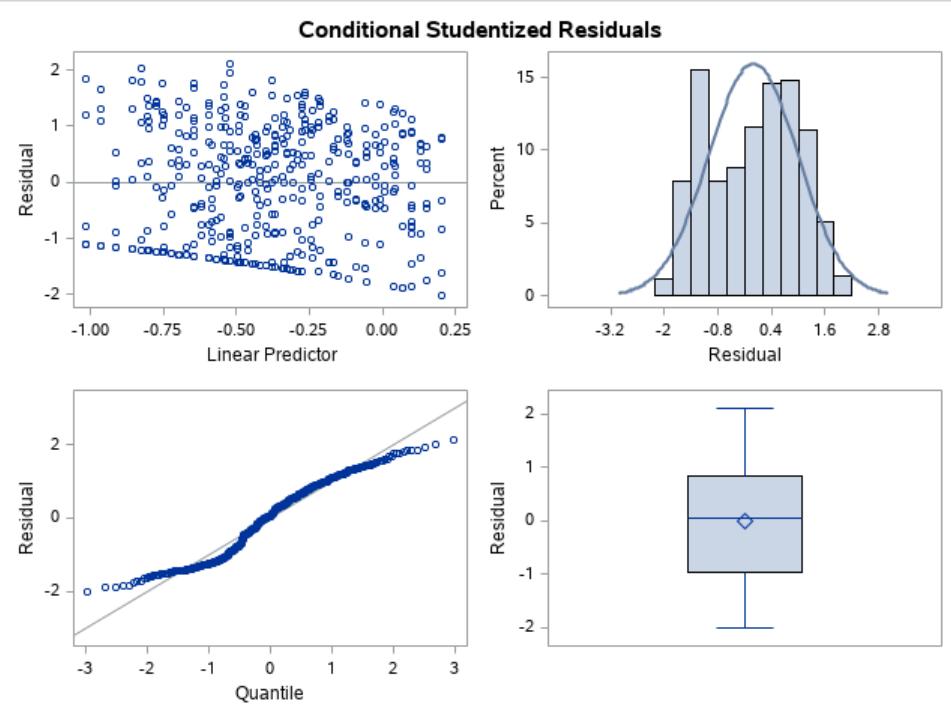
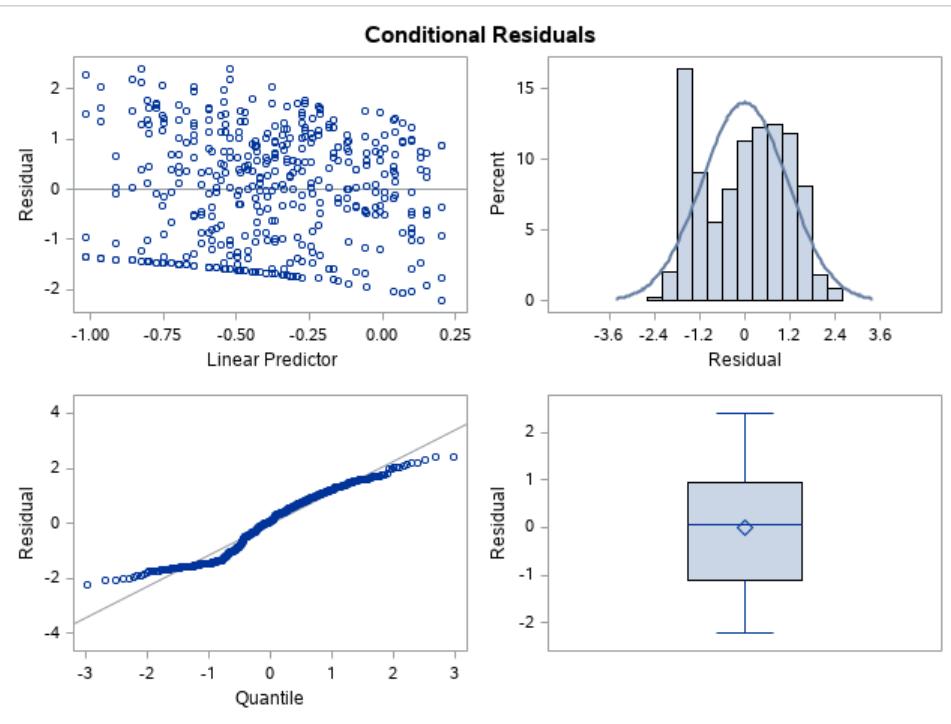
Estimated G matrix is not positive definite.

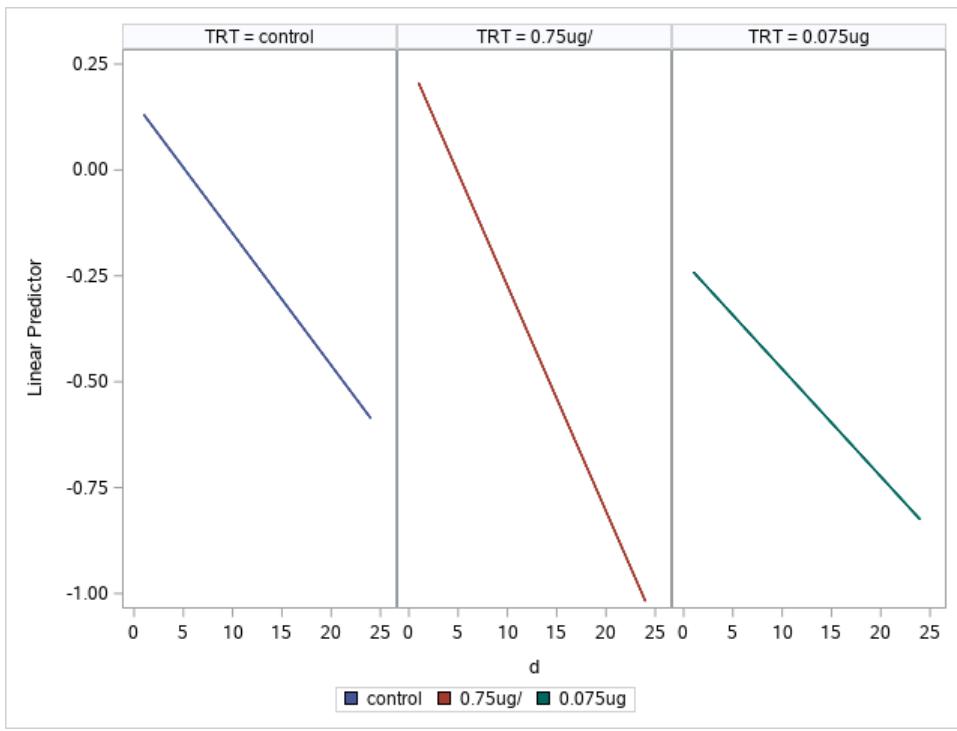
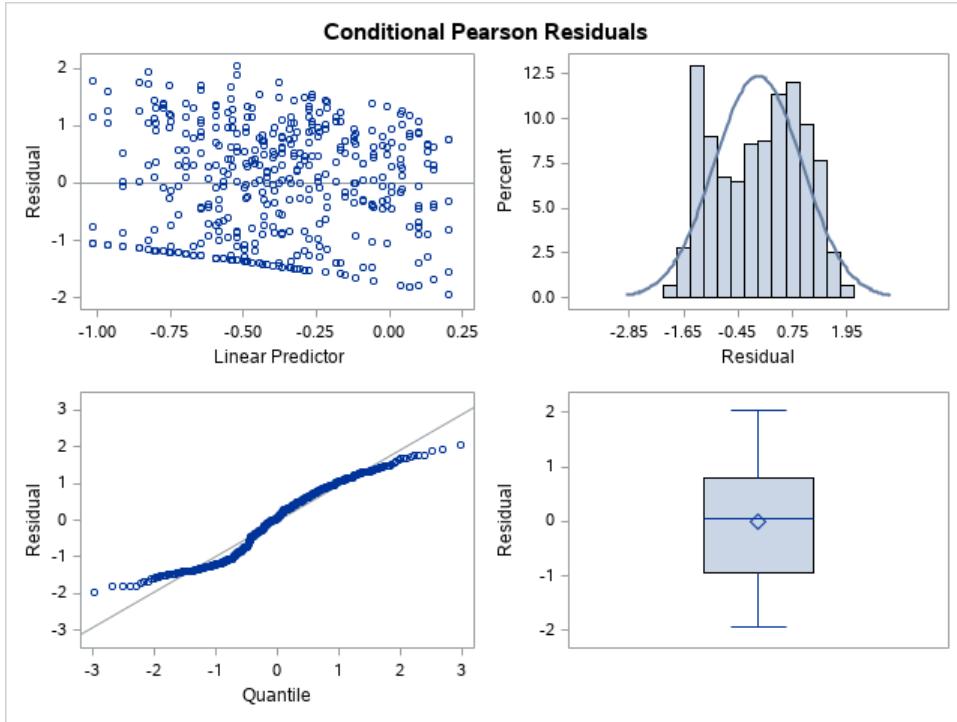
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1233.23
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

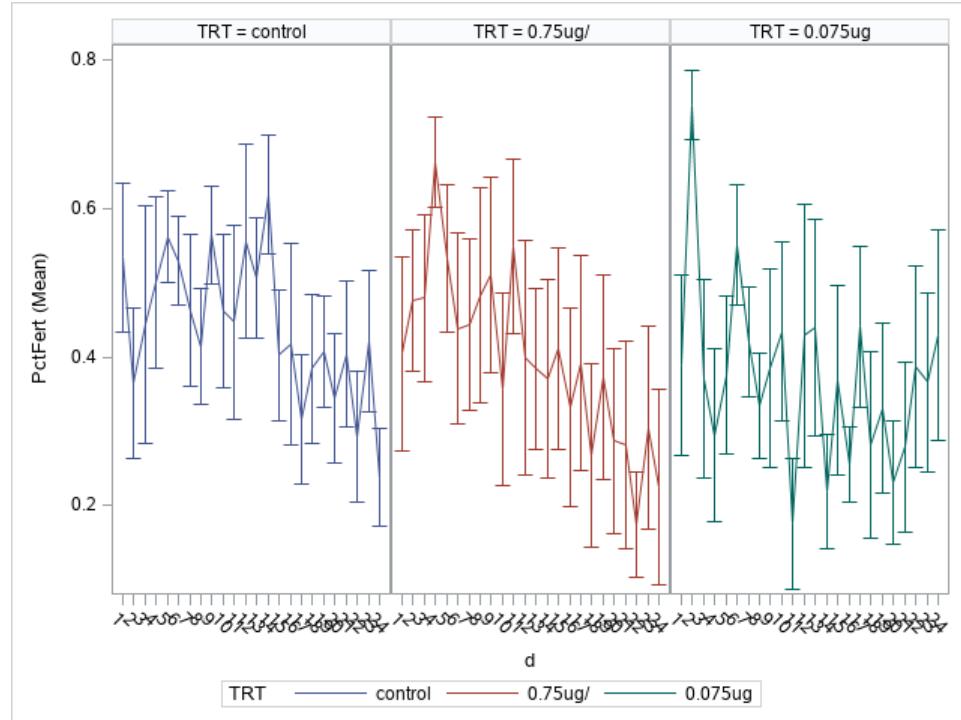
Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0	1.8906
Variance	TNK	0.8237	0.06001
CS	TNK	0.4685	1.3854
Scale		2.9963	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		0.1615	0.3182	15	0.51	0.6192
TRT	0.075ug	-0.3771	0.4521	411	-0.83	0.4047
TRT	0.75ug/	0.09690	0.4471	411	0.22	0.8285
TRT	control	0
d		-0.03114	0.01113	411	-2.80	0.0054
d*TRT	0.075ug	0.005727	0.01596	411	0.36	0.7198
d*TRT	0.75ug/	-0.02205	0.01606	411	-1.37	0.1705
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	1.23	0.62	0.5397	0.5402
d	1	411	30.97	30.97	<.0001	<.0001
d*TRT	2	411	3.25	1.62	0.1971	0.1983







The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	2
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	3
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	8	874.97038793	2.00000000	0.000034
1	0	9	1065.6017356	1.98474265	0.000024

Iteration History						
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient	
2	0	0	1.340781E154	0.15819738	435.9641	
3	1	1	1115.0247279	.	302.0273	
4	0	5	1114.2397432	2.00000000	0.000014	
5	0	4	1136.7479505	2.00000000	0.000295	
6	0	2	1147.2662155	1.79598702	0.000126	
7	0	1	1147.2494911	0.05110358	0.000028	
8	0	1	1147.2505697	0.00008049	2.203E-8	
9	0	1	1147.2505388	0.00000071	1.11E-10	
10	0	0	1147.2505397	0.00000000	5.022E-6	

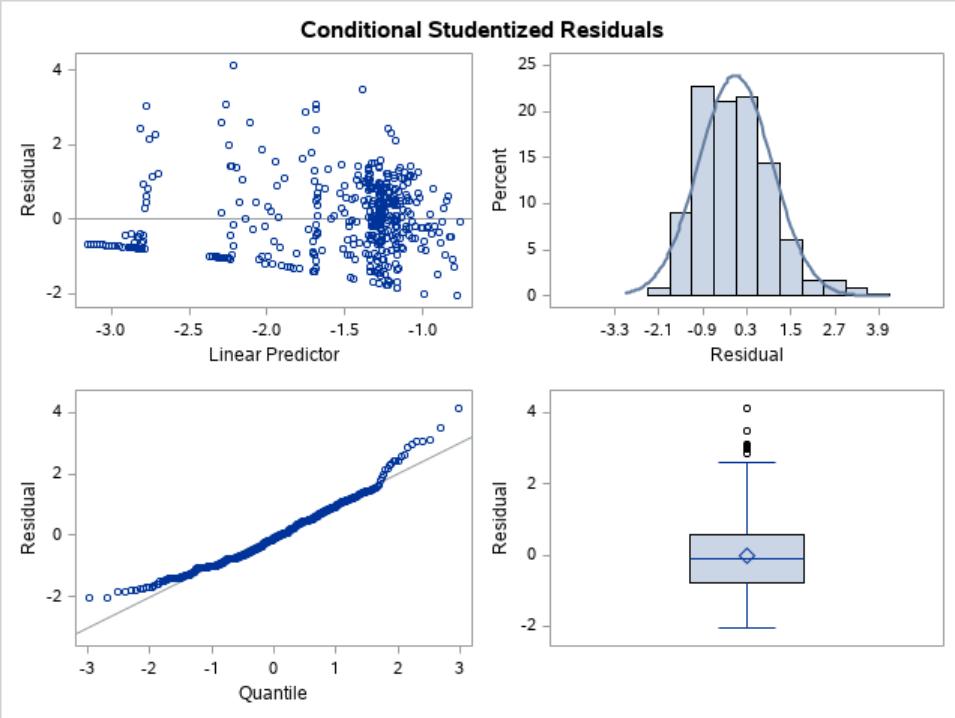
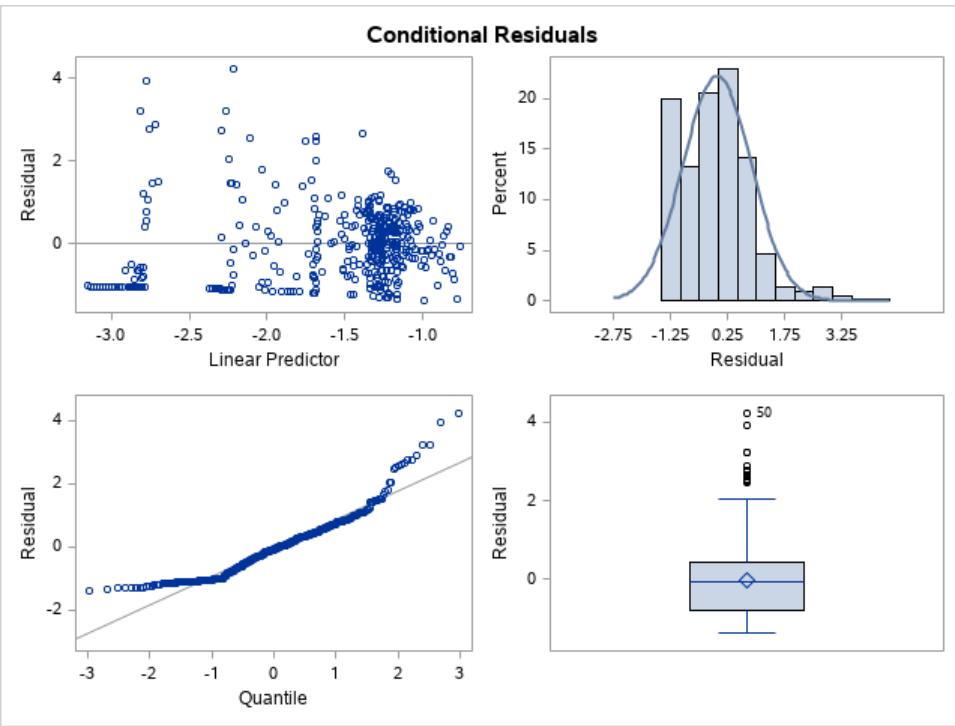
Convergence criterion (PCONV=1.11022E-8) satisfied.

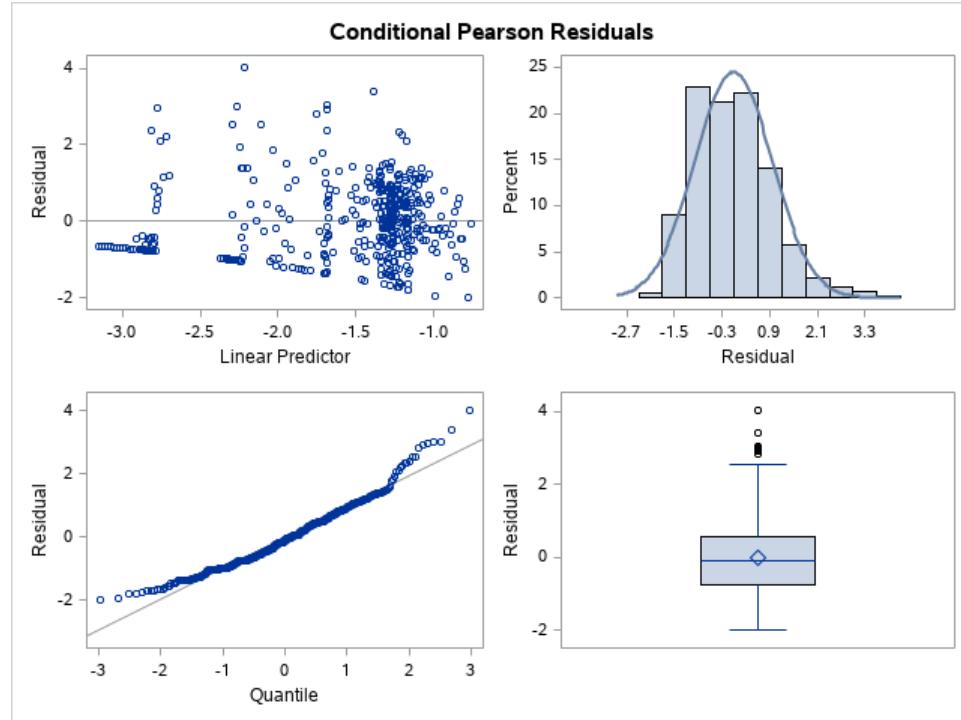
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1147.25
Generalized Chi-Square	41.49
Gener. Chi-Square / DF	0.10

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.3857	0.1610
t	TNK	0.09740	0.006808
Scale		0.000520	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.3121	0.2857	15	-4.59	0.0004
TRT	0.075ug	-0.3406	0.4097	411	-0.83	0.4062
TRT	0.75ug/	-0.1236	0.4080	411	-0.30	0.7622
TRT	control	0
d		-0.00133	0.009229	411	-0.14	0.8856
d*TRT	0.075ug	-0.00385	0.01377	411	-0.28	0.7800
d*TRT	0.75ug/	-0.01865	0.01370	411	-1.36	0.1742
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.71	0.35	0.7028	0.7030
d	1	411	2.40	2.40	0.1214	0.1221
d*TRT	2	411	1.99	1.00	0.3691	0.3700





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	0	792.2286324	.	35224.84

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	9	635.02731252	2.00000000	2.004637
2	0	5	951.38155212	1.85027653	11.33654
3	0	3	1048.4119751	0.79498805	14.51489
4	0	3	1055.7885133	0.88704788	15.05854
5	0	1	1055.8030239	0.00056902	15.06388
6	0	1	1055.8027373	0.00000063	15.06387
7	0	0	1055.8027377	0.00000000	15.06387

Convergence criterion (PCONV=1.11022E-8) satisfied.

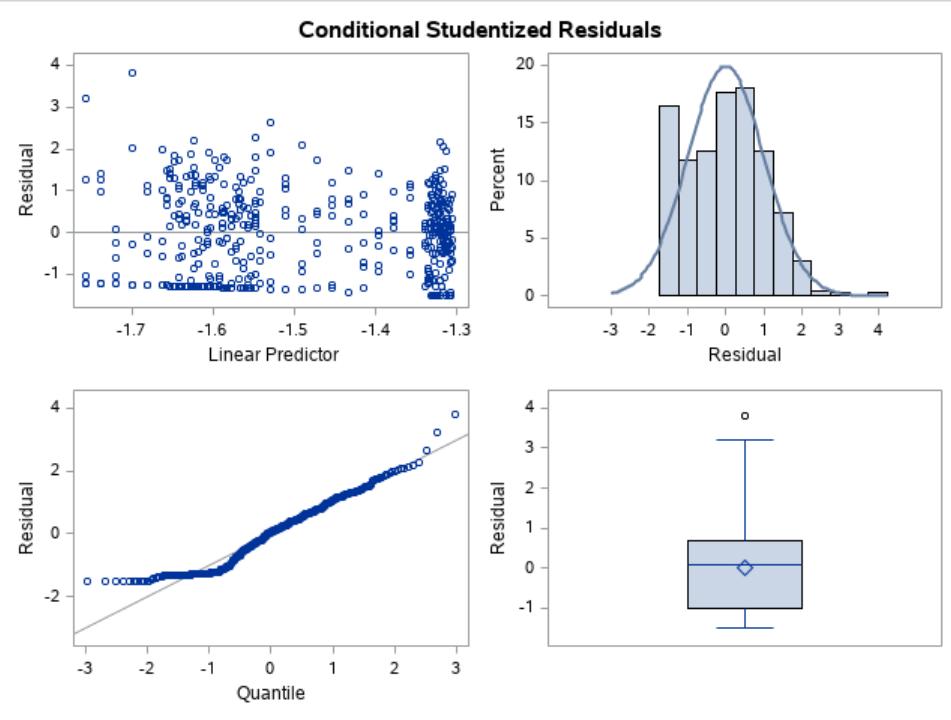
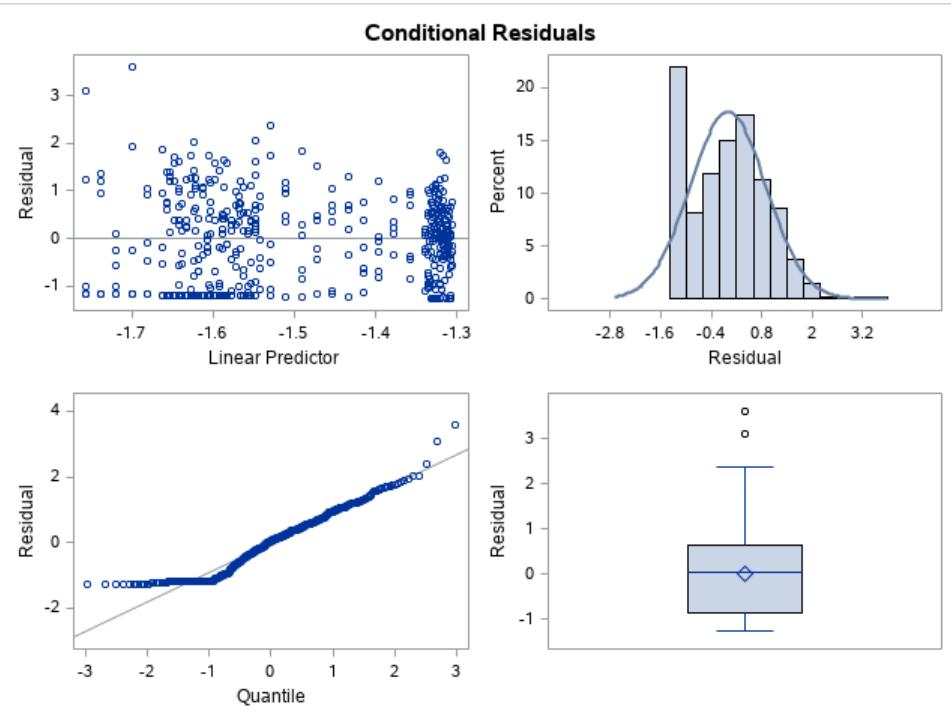
Estimated G matrix is not positive definite.

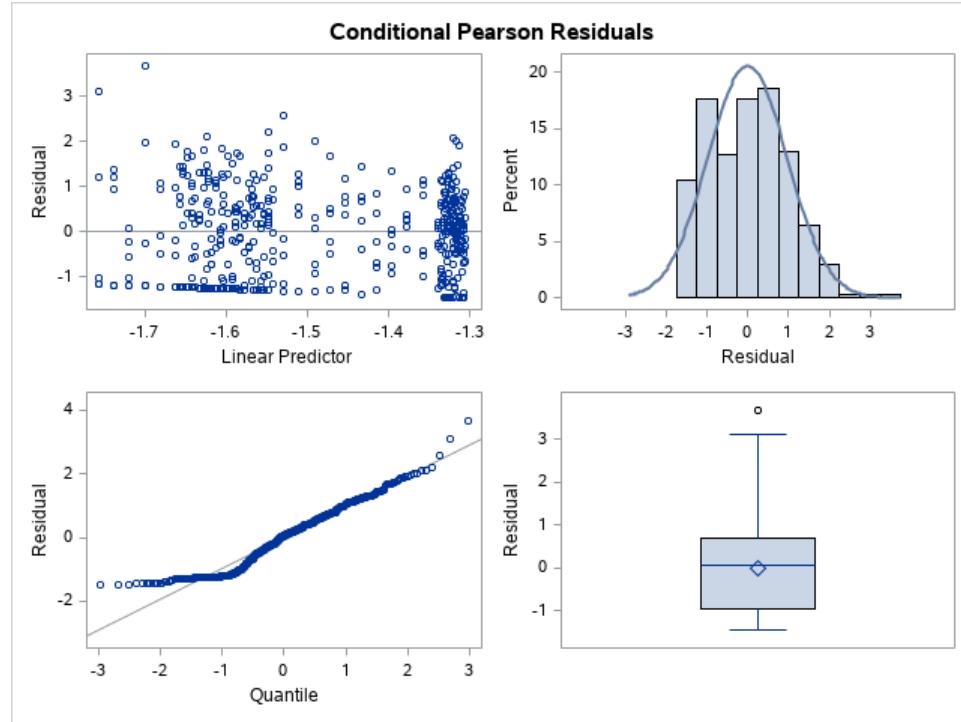
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1055.80
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0	.
Variance	TNK	0.09085	0.006337
CS	TNK	0.03923	0.01571
Scale		0.04206	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.3040	0.2298	15	-5.67	<.0001
TRT	0.075ug	-0.2339	0.3376	411	-0.69	0.4888
TRT	0.75ug/	0.003013	0.3260	411	0.01	0.9926
TRT	control	0
d		-0.00132	0.008717	411	-0.15	0.8794
d*TRT	0.075ug	-0.00368	0.01291	411	-0.29	0.7757
d*TRT	0.75ug/	-0.01770	0.01284	411	-1.38	0.1689
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.63	0.32	0.7292	0.7294
d	1	411	2.51	2.51	0.1128	0.1136
d*TRT	2	411	2.05	1.03	0.3586	0.3595





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	4
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	1	9	771.22280506	2.00000000	0.000012

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	7	1006.8817787	1.64909167	3.967E-7
2	0	7	1094.4302142	0.52778408	9.569E-6
3	0	3	1111.2488892	0.41597171	0.001631
4	0	1	1111.353257	0.00577151	7.841E-6
5	0	1	1111.3550818	0.00003570	6.578E-8
6	0	1	1111.3549661	0.00000061	1.799E-9
7	0	1	1111.3549738	0.00000004	1.21E-10
8	0	0	1111.3549733	0.00000000	2.628E-6

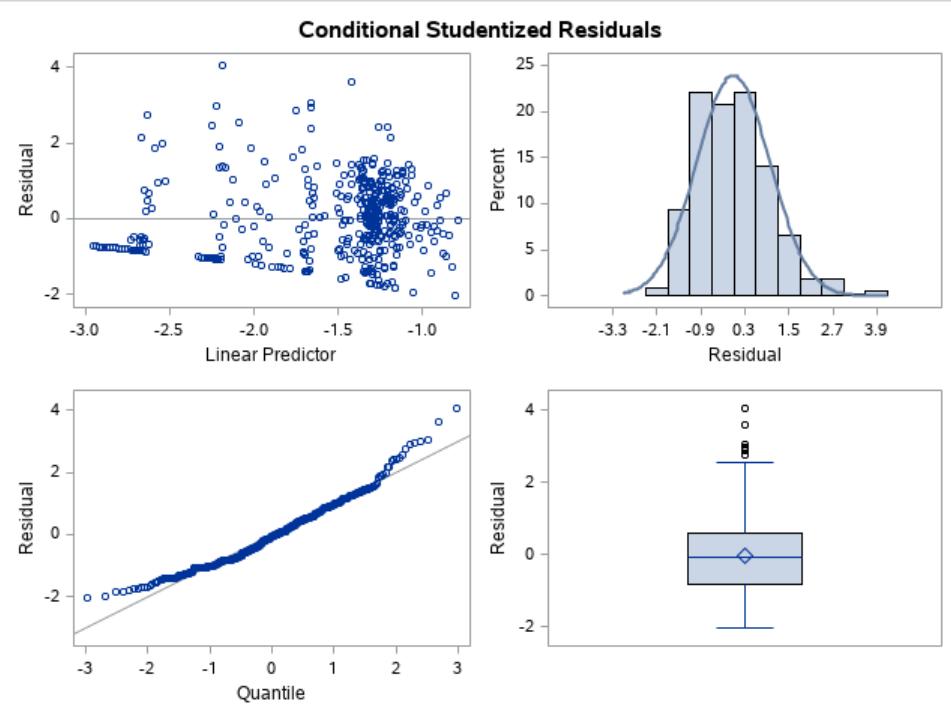
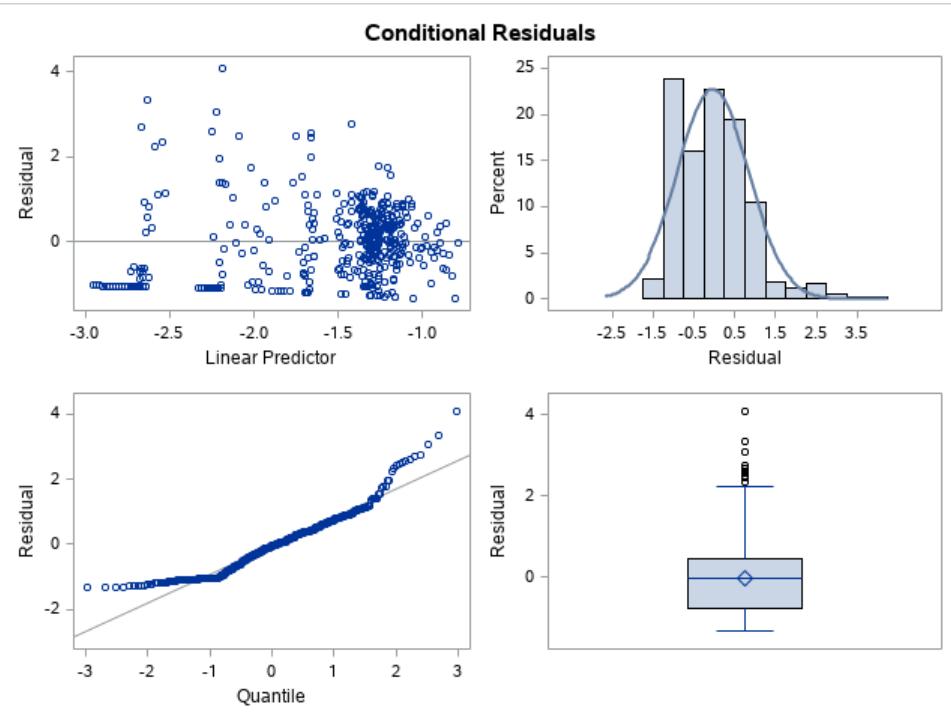
Convergence criterion (PCONV=1.11022E-8) satisfied.

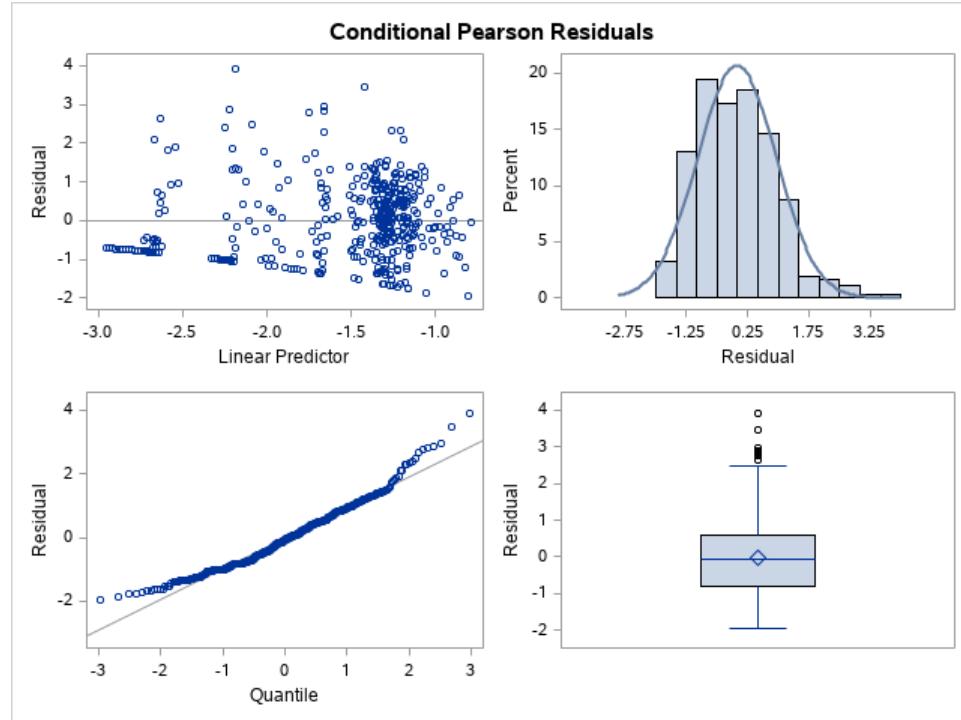
Fit Statistics	
-2 Res Log Pseudo-Likelihood	1111.35
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0.3347	0.1523
Variance	TNK	0.09955	.
AR(1)	TNK	0.2513	0.05213
Scale		0.003110	0.07808

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.3002	0.2887	15	-4.50	0.0004
TRT	0.075ug	-0.3436	0.4165	411	-0.82	0.4099
TRT	0.75ug/	-0.1371	0.4139	411	-0.33	0.7406
TRT	control	0
d		-0.00293	0.01159	411	-0.25	0.8007
d*TRT	0.075ug	-0.00125	0.01724	411	-0.07	0.9424
d*TRT	0.75ug/	-0.01539	0.01716	411	-0.90	0.3704
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.69	0.34	0.7095	0.7097
d	1	411	1.41	1.41	0.2348	0.2355
d*TRT	2	411	0.94	0.47	0.6235	0.6239





The GLIMMIX Procedure

Model Information	
Data Set	WORK.EXEMESTANE
Response Variable	PctVBL
Response Distribution	Beta
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	TNK
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
TNK	18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
t	24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TRT	3	0.075ug 0.75ug/ control

Number of Observations Read	432
Number of Observations Used	432

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	3
Columns in X	8
Columns in Z per Subject	1
Subjects (Blocks in V)	18
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Newton-Raphson with Ridging
Parameters in Optimization	4
Lower Boundaries	3
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	0	792.2286324	.	35224.84

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
1	0	9	635.02731252	2.00000000	2.004637
2	0	5	951.38155212	1.85027653	11.33654
3	0	3	1048.4119751	0.79498805	14.51489
4	0	3	1055.7885133	0.88704788	15.05854
5	0	1	1055.8030239	0.00056902	15.06388
6	0	1	1055.8027373	0.00000063	15.06387
7	0	0	1055.8027377	0.00000000	15.06387

Convergence criterion (PCONV=1.11022E-8) satisfied.

Estimated G matrix is not positive definite.

Fit Statistics	
-2 Res Log Pseudo-Likelihood	1055.80
Generalized Chi-Square	426.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	TNK	0	.
Variance	TNK	0.09085	0.006337
CS	TNK	0.03923	0.01571
Scale		0.04206	.

Solutions for Fixed Effects						
Effect	TRT	Estimate	Standard Error	DF	t Value	Pr > t
Intercept		-1.3040	0.2298	15	-5.67	<.0001
TRT	0.075ug	-0.2339	0.3376	411	-0.69	0.4888
TRT	0.75ug/	0.003013	0.3260	411	0.01	0.9926
TRT	control	0
d		-0.00132	0.008717	411	-0.15	0.8794
d*TRT	0.075ug	-0.00368	0.01291	411	-0.29	0.7757
d*TRT	0.75ug/	-0.01770	0.01284	411	-1.38	0.1689
d*TRT	control	0

Type III Tests of Fixed Effects						
Effect	Num DF	Den DF	Chi-Square	F Value	Pr > ChiSq	Pr > F
TRT	2	411	0.63	0.32	0.7292	0.7294
d	1	411	2.51	2.51	0.1128	0.1136
d*TRT	2	411	2.05	1.03	0.3586	0.3595

