

Syntax

Example 1 SPSS Syntax

*Model 1

```
MIXED walkdist WITH gmage female  
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
  SCORING(1)  
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
  ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
  /FIXED= | SSTYPE(3)  
  /METHOD=ML  
  /PRINT=G SOLUTION TESTCOV  
  /RANDOM=INTERCEPT | SUBJECT(centerid) COVTYPE(VC).
```

*Model 2

```
MIXED walkdist WITH ztherapy grptherapy1 qual female gmage stay  
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
  SCORING(1)  
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
  ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
  /FIXED= female gmage stay ztherapy | SSTYPE(3)  
  /METHOD=ML  
  /PRINT=G SOLUTION TESTCOV  
  /RANDOM=INTERCEPT | SUBJECT(centerid) COVTYPE(UN).
```

*Model 3

```
MIXED walkdist WITH ztherapy qual female gmage stay  
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
  SCORING(1)  
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
  ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
  /FIXED= qual female gmage stay ztherapy | SSTYPE(3)  
  /METHOD=ML  
  /PRINT=G SOLUTION TESTCOV  
  /RANDOM=INTERCEPT | SUBJECT(centerid) COVTYPE(UN).
```

*Model 4

```
MIXED walkdist WITH qual female gmage stay ztherapy  
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
  SCORING(1)  
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
  ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
```

```
/FIXED= qual female gimage stay ztherapy | SSTYPE(3)
/METHOD=ML
/PRINT=G SOLUTION TESTCOV
/RANDOM=INTERCEPT ztherapy | SUBJECT(centerid) COVTYPE(UN).
```

*Model 5

```
MIXED walkdist WITH age female stay gimage qual ztherapy
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)
SCORING(1)
SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
/FIXED=qual female gimage stay ztherapy qual*ztherapy | SSTYPE(3)
/METHOD=ML
/PRINT=G SOLUTION TESTCOV
/RANDOM=INTERCEPT ztherapy | SUBJECT(centerid) COVTYPE(UN).
```

Example 1 Stata Syntax¹

Stata Syntax Model 1

mixed walkdist ||centerid:

Stata Syntax Model 2

mixed walkdis female gimage stay ztherapy ||centerid:

Stata Syntax Model 3

mixed walkdist qual female gimage stay ztherapy ||centerid:

Stata Syntax Model 4

mixed walkdist qual female gimage stay ztherapy||centerid:ztherapy, mle cov(uns)

Stata Syntax Model 5

mixed walkdist female gimage stay c.qual##c.ztherapy||centerid:ztherapy, mle cov(uns)

Example 2 SPSS Syntax

*Model1

MIXED memory WITH linear quad

```
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)
SCORING(1)
  SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
  /FIXED= | SSTYPE(3)
  /METHOD=ML
  /PRINT=G SOLUTION TESTCOV
  /RANDOM=INTERCEPT | SUBJECT(id) COVTYPE(VC)
  /REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

*Model2

MIXED memory WITH linear quad

```
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)
SCORING(1)
  SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
  /FIXED= linear | SSTYPE(3)
  /METHOD=ML
  /PRINT=G SOLUTION TESTCOV
  /RANDOM=INTERCEPT | SUBJECT(id) COVTYPE(VC)
  /REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

*Model3

MIXED memory WITH orthlin orthquad

```
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)
SCORING(1)
  SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
  /FIXED= orthlin orthquad | SSTYPE(3)
  /METHOD=ML
  /PRINT=G SOLUTION TESTCOV
  /RANDOM=INTERCEPT | SUBJECT(id) COVTYPE(ID)
  /REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

*Model 3a

```
MIXED memory WITH orthlin orthquad  
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
SCORING(1)  
SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
/FIXED= orthlin orthquad | SSTYPE(3)  
/METHOD=ML  
/PRINT=G SOLUTION TESTCOV  
/RANDOM=INTERCEPT orthlin orthquad | SUBJECT(id) COVTYPE(VC)  
/REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

*Model4

```
MIXED memory WITH orthlin orthquad gimage gmdays  
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
SCORING(1)  
SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
/FIXED= gimage gmdays orthlin orthquad | SSTYPE(3)  
/METHOD=ML  
/PRINT=G SOLUTION TESTCOV  
/RANDOM=INTERCEPT orthlin orthquad | SUBJECT(id) COVTYPE(VC)  
/REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

*Model5

```
MIXED memory WITH growth1 growth2 gimage gmdays  
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10)  
SCORING(1)  
SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0,  
ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)  
/FIXED= growth1 growth2 gimage gmdays| SSTYPE(3)  
/METHOD=ML  
/PRINT=G SOLUTION TESTCOV  
/RANDOM=INTERCEPT growth1 growth2 | SUBJECT(id) COVTYPE(VC)  
/REPEATED=Index1 | SUBJECT(id) COVTYPE(ID).
```

Example 2 Stata Syntax

Stata Syntax Model 1

mixed memory ||id:

Stata Syntax Model 2

mixed memory linear ||id:

Stata Syntax Model 3

mixed memory orthlin orthquad ||id:

Stata Syntax Model 3a

mixed memory orthlin orthquad ||id:orthlin ||id:orthquad

Stata Syntax Model 4

mixed memory gimage gmdays orthlin orthquad ||id:orthlin ||id:orthquad

Stata Syntax Model 5

mixed memory gimage gmdays growth1 growth2 ||id:growth1 ||id:growth2

¹StataCorp.(2017). *Stata Statistical Software: Release 15*. College Station, TX: StataCorp LLC.
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