```
$PROBLEM TWO COMPARTMENT INTRAVENOUS BOLUS      ;DATE = 6/2/04 PROGRAMMER=XXXX
                                                ;Units: Time=hr, Concentration=ug/ml,
                                                ;Dose=100 or 250 mg
                                                ;Clearance = L/hr, Volume = L

$DATA IV2EST_PAR.CSV IGNORE=C

$INPUT ID TIME CONC=DV AMT DOSE MDV

$SUBROUTINE ADVAN3 TRANS4

$PK
   CL  = THETA(1)*EXP(ETA(1))   ;CL
   V1  = THETA(2)*EXP(ETA(2))   ;Central volume of distribution
   Q   = THETA(3)*EXP(ETA(3))   ;Intercompartment Clearance
   V2  = THETA(4)*EXP(ETA(4))   ;Peripheral volume
   S1  = V1

$ERROR
   IPRED=F
   Y=F+F*ERR(1)+ERR(2)
                               ;Additive and proportional residual error model

$THETA (0.1,1)         ;POPCL
$THETA (1,10)          ;POPVOL
$THETA (0.1,1.5)       ;POPQ
$THETA (1,5)           ;POPV2

$OMEGA 0.09            ;BSVCL
$OMEGA 0.09            ;BSVV1
$OMEGA 0.09            ;BSVQ
$OMEGA 0.09            ;BSVV2

$SIGMA 0.01            ;ERRCV
$SIGMA  1              ;ERRSD

$ESTIMATION METHOD=0 MAXEVAL=9999 PRINT=5 POSTHOC
$COVARIANCE

$TABLE ID TIME DV IPRED DOSE
NOPRINT ONEHEADER FILE=iv2est_par.fit
```