1 . 4 . > 5 7. 9. 10 . \*\*Model 1\*\* 11 . 12 . use HANDLS\_paper51\_NFLBRAINSCANFINALIZED,clear 13 . 14 .

15 . //ANALYSIS B//

16 . reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN ICV\_volM2 if Race==2,beta note: Race omitted because of collinearity.

| Source            | SS                       | df        | MS                       | Number of obs                 | = 81                           |
|-------------------|--------------------------|-----------|--------------------------|-------------------------------|--------------------------------|
| Model<br>Residual | 4360319.21<br>5475745.46 | 6<br>74   | 726719.868<br>73996.5603 | R-squared                     | = 9.82<br>= 0.0000<br>= 0.4433 |
| Total             | 9836064.67               | 80        | 122950.808               | - Adj R-squared<br>B Root MSE | = 0.3982<br>= 272.02           |
| <br>Left_Hippo~s  | Coefficient              | Std. err. | t                        | P> t                          | Beta                           |
| LnNFLw1           | 33.75394                 | 69.62813  | 0.48                     | 0.629                         | .0510559                       |
| Sex               | -35.81574                | 81.35268  | -0.44                    | 0.661                         | 0512917                        |
| w1Age             | -9.917578                | 4.045381  | -2.45                    | 0.017                         | 2758433                        |
| Race              | 0                        | (omitted) |                          |                               |                                |
| PovStat           | -194.304                 | 75.54538  | -2.57                    | 0.012                         | 273972                         |
| TIME_V1SCAN       | .0117587                 | .0580229  | 0.20                     | 0.840                         | .0198255                       |
| ICV_volM2         | .001755                  | .0003279  | 5.35                     | 0.000                         | .6265461                       |
| _cons             | 1838.151                 | 441.0377  | 4.17                     | 0.000                         | •                              |

17 . reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN ICV\_volM2 if Race==2,beta note: Race omitted because of collinearity.

| Source       | SS          | df        | MS        | Number of obs                     | = 81     |
|--------------|-------------|-----------|-----------|-----------------------------------|----------|
|              |             |           |           | - F(6, 74)                        | = 11.00  |
| Model        | 4456772.68  | 6         | 742795.44 | <b>6</b> Prob > F                 | = 0.0000 |
| Residual     | 4995900.79  | 74        | 67512.172 | 8 R-squared                       | = 0.4715 |
|              |             |           |           | <ul> <li>Adj R-squared</li> </ul> | = 0.4286 |
| Total        | 9452673.47  | 80        | 118158.41 | 8 Root MSE                        | = 259.83 |
|              |             |           |           |                                   |          |
| Right_Hipp~s | Coefficient | Std. err. | t         | P> t                              | Beta     |
| LnNFLw1      | 28.40243    | 66.5074   | 0.43      | 0.671                             | .0438238 |
| Sex          | -36.00451   | 77.70646  | -0.46     | 0.644                             | 0525973  |
| w1Age        | -8.771393   | 3.864068  | -2.27     | 0.026                             | 2488621  |
| Race         | 0           | (omitted) |           |                                   |          |
| PovStat      | -179.4274   | 72.15945  | -2.49     | 0.015                             | 2580753  |
| TIME V1SCAN  | .032344     | .0554223  | 0.58      | 0.561                             | .0556278 |
| ICV volM2    | .001834     | .0003132  | 5.86      | 0.000                             | .6678928 |
| cons         | 1900.029    | 421.2704  | 4.51      | 0.000                             |          |
|              |             |           |           |                                   | •        |

note: Race omitted because of collinearity.

| Source       | SS          | df        | MS         | Number of obs                     | = | 80       |
|--------------|-------------|-----------|------------|-----------------------------------|---|----------|
|              |             |           |            | - F(6, 73)                        | = | 2.77     |
| Model        | 139.041818  | 6         | 23.1736364 | 4  Prob > F                       | = | 0.0175   |
| Residual     | 610.619757  | 73        | 8.3646542  | 1 R-squared                       | = | 0.1855   |
|              |             |           |            | <ul> <li>Adj R-squared</li> </ul> | = | 0.1185   |
| Total        | 749.661575  | 79        | 9.4893870  | Root MSE                          | = | 2.8922   |
|              |             |           |            |                                   |   |          |
| LnLesion_V~e | Coefficient | Std. err. | t          | P> t                              |   | Beta     |
| LnNFLw1      | 1.593774    | .7403937  | 2.15       | 0.035                             |   | .2754611 |
| Sex          | .5086068    | .8739571  | 0.58       | 0.562                             |   | .08297   |
| w1Age        | .0263046    | .0432589  | 0.61       | 0.545                             |   | .0829003 |
| Race         | 0           | (omitted) |            |                                   |   | •        |
| PovStat      | 2667706     | .8034438  | -0.33      | 0.741                             | - | .0429009 |
| TIME_V1SCAN  | 0006005     | .0006182  | -0.97      | 0.335                             | - | .1154386 |
| ICV_volM2    | 4.30e-06    | 3.50e-06  | 1.23       | 0.223                             |   | .17605   |
| _cons        | -2.818937   | 4.699444  | -0.60      | 0.550                             |   | •        |

21 .

22 . 23 . \*\*Model 2\*\*

24 .

25 . use finaldata\_imputed,clear

26 .

27 . 28 . //ANALYSIS B//

29 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

| Multiple-imputation | on estimates |   | Imputation    | ons   | = | 5      |
|---------------------|--------------|---|---------------|-------|---|--------|
| Linear regression   |              |   | Number of     | obs   | = | 81     |
|                     |              |   | Average F     | RVI   | = | 0.0000 |
|                     |              |   | Largest F     | MI    | = | 0.0000 |
|                     |              |   | Complete      | DF    | = | 73     |
| DF adjustment:      | Small sample | } | DF: r         | nin   | = | 71.08  |
|                     |              |   | ā             | avg   | = | 71.08  |
|                     |              |   | r             | nax   | = | 71.08  |
| Model F test:       | Equal FM3    |   | F( <b>7</b> , | 71.1) | = | 8.31   |
| Within VCE type:    | OLS          |   | Prob > F      |       | = | 0.0000 |
|                     |              |   |               |       |   |        |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 29.77564    | 77.58938  | 0.38  | 0.702 | -124.9302  | 184.4815  |
| Sex          | -37.83102   | 83.61558  | -0.45 | 0.652 | -204.5525  | 128.8905  |
| w1Age        | -9.691391   | 4.490337  | -2.16 | 0.034 | -18.6447   | 7380861   |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -192.8933   | 76.96299  | -2.51 | 0.014 | -346.3502  | -39.43638 |
| TIME_V1SCAN  | .0111758    | .0586162  | 0.19  | 0.849 | 1056993    | .1280509  |
| w1BMI        | 676547      | 5.6571    | -0.12 | 0.905 | -11.95627  | 10.60317  |
| ICV_volM2    | .0017589    | .0003318  | 5.30  | 0.000 | .0010974   | .0024205  |
| _cons        | 1852.069    | 459.0036  | 4.03  | 0.000 | 936.8594   | 2767.279  |

30 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

| Multiple-imput                 | Multiple-imputation estimates |           |               | Imputations |         |             | = 5       |  |
|--------------------------------|-------------------------------|-----------|---------------|-------------|---------|-------------|-----------|--|
| Linear regress                 | sion                          |           |               | Number      | of obs  | =           | 81        |  |
|                                |                               |           |               | Average     | RVI     | =           | 0.0000    |  |
|                                |                               |           |               | Largest     | : FMI   | =           | 0.0000    |  |
|                                |                               |           |               | Complet     | e DF    | =           | 73        |  |
| DF adjustment:                 | : Small samp                  | le        |               | DF:         | min     | =           | 71.08     |  |
|                                |                               |           |               |             | avg     | =           | 71.08     |  |
|                                |                               |           |               |             | max     | =           | 71.08     |  |
| Model F test: <b>Equal FMI</b> |                               |           | F( <b>7</b> , | 71.1)       | =       | 9.45        |           |  |
| Within VCE typ                 | oe: C                         | OLS       |               | Prob >      | F       | =           | 0.0000    |  |
| Right_Hipp~s                   | Coefficient                   | Std. err. | t             | P> t        | [95% c  | onf.        | interval] |  |
| LnNFLw1                        | 4.736612                      | 73.83699  | 0.06          | 0.949       | -142.48 | 373         | 151.9606  |  |
| Sex                            | -47.99283                     | 79.57176  | -0.60         | 0.548       | -206.65 | 14          | 110.6657  |  |
| w1Age                          | -7.425862                     | 4.273174  | -1.74         | 0.087       | -15.946 | 17          | 1.094441  |  |
| Race                           | 0                             | (omitted) |               |             |         |             |           |  |
| PovStat                        | -171.0353                     | 73.2409   | -2.34         | 0.022       | -317.07 | <b>'</b> 06 | -24.99987 |  |
| TIME_V1SCAN                    | .0288766                      | .0557814  | 0.52          | 0.606       | 08234   | 61          | .1400994  |  |
| w1BMI                          | -4.0246                       | 5.38351   | -0.75         | 0.457       | -14.758 | 881         | 6.709607  |  |
| ICV_volM2                      | .0018576                      | .0003158  | 5.88          | 0.000       | .00122  | 281         | .0024872  |  |
| _cons                          | 1982.824                      | 436.8052  | 4.54          | 0.000       | 1111.8  | 376         | 2853.772  |  |

<sup>33 .</sup> mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

|               | Multiple-imputation estimates<br>Linear regression |   |                            | S    | =<br>=<br>= | 5<br>80<br>0.0000 |
|---------------|--|---|----------------------------|------|-------------|-------------------|
|               |  |   | Average RVI<br>Largest FMI |      | =           | 0.0000            |
|               |  |   | Complete DF                |      | =           | 72                |
| DF adjustment | : Small sample                                     |   | DF: min                    |      | =           | 70.08             |
|               |  |   | avg                        |      | =           | 70.08             |
|               |  |   | max                        |      | =           | 70.08             |
| Model F test: | Equal FMI  |   | F( <b>7</b> , <b>70</b>    | .1)  | =           | 2.61              |
| Within VCE ty | oe: OLS  |   | Prob > F                   |      | =           | 0.0186            |
| LnLesion_V~e  | Coefficient Std. err.                              | t | P> t  [9                   | 5% c | onf.        | interval]         |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 2.029584    | .8163415  | 2.49  | 0.015 | .4014749   | 3.657693  |
| Sex          | .7346978    | .8893779  | 0.83  | 0.412 | -1.039075  | 2.50847   |
| w1Age        | .0013106    | .0475362  | 0.03  | 0.978 | 0934955    | .0961167  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 4206953     | .8098989  | -0.52 | 0.605 | -2.035955  | 1.194565  |
| TIME_V1SCAN  | 000535      | .0006181  | -0.87 | 0.390 | 0017677    | .0006977  |
| w1BMI        | .0741984    | .0595517  | 1.25  | 0.217 | 0445715    | .1929682  |
| ICV_volM2    | 3.86e-06    | 3.51e-06  | 1.10  | 0.275 | -3.14e-06  | .0000108  |
| _cons        | -4.332765   | 4.836852  | -0.90 | 0.373 | -13.97937  | 5.313839  |

<sup>31 .</sup> 32 . //ANALYSIS C//

35 . save, replace

file finaldata\_imputed.dta saved

36 . 37 .

38 **.** 39 **.** 

40 .

44 .

45 . use HANDLS\_paper51\_NFLBRAINSCANFINALIZED,clear

46 .

47 .

48 . //ANALYSIS B//

| Source            | SS                      | df        | MS                     | Number of ob               |                                       |
|-------------------|-------------------------|-----------|------------------------|----------------------------|---------------------------------------|
| Model<br>Residual | 6902827.3<br>10591877.9 | 6<br>112  | 1150471.2<br>94570.338 | 2 R-squared                | = 0.0000<br>= 0.3946                  |
| Total             | 17494705.2              | 118       | 148260.21              | Adj R-square<br>3 Root MSE | ed = <b>0.3621</b><br>= <b>307.52</b> |
| Left_Hippo~s      | Coefficient             | Std. err. | t                      | P> t                       | Beta                                  |
| LnNFLw1           | -59.07982               | 68.18194  | -0.87                  | 0.388                      | 0770314                               |
| Sex               | -62.96597               | 79.60628  | -0.79                  | 0.431                      | 0816186                               |
| w1Age             | -1.96424                | 3.917467  | -0.50                  | 0.617                      | 0440427                               |
| Race              | 0                       | (omitted) |                        |                            |                                       |
| PovStat           | -20.8187                | 66.75394  | -0.31                  | 0.756                      | 0243071                               |
| TIME_V1SCAN       | .0157425                | .0453558  | 0.35                   | 0.729                      | .0269641                              |
| ICV_volM2         | .0018357                | .0002854  | 6.43                   | 0.000                      | .6797785                              |
| _cons             | 1405.827                | 406.0669  | 3.46                   | 0.001                      | •                                     |

50 . reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN ICV\_volM2 if Race==1,beta note: Race omitted because of collinearity.

| Source       | SS          | df        | MS         | Number of obs      | = 119    |
|--------------|-------------|-----------|------------|--------------------|----------|
|              |             |           |            | - F(6, 112)        | = 16.01  |
| Model        | 9536986.28  | 6         | 1589497.73 | 1 Prob > F         | = 0.0000 |
| Residual     | 11119319.2  | 112       | 99279.6363 | <b>1</b> R-squared | = 0.4617 |
|              |             |           |            | - Adj R-squared    | = 0.4329 |
| Total        | 20656305.5  | 118       | 175053.437 | 7 Root MSE         | = 315.09 |
|              |             |           |            |                    |          |
| Right_Hipp~s | Coefficient | Std. err. | t          | P> t               | Beta     |
| LnNFLw1      | -65.49318   | 69.85893  | -0.94      | 0.351              | 0785871  |
| Sex          | -187.5818   | 81.56427  | -2.30      | 0.023              | 2237694  |
| w1Age        | 1.029926    | 4.013821  | 0.26       | 0.798              | .0212526 |
| Race         | 0           | (omitted) |            |                    | •        |
| PovStat      | 9.560409    | 68.39582  | 0.14       | 0.889              | .0102727 |
| TIME_V1SCAN  | .0473511    | .0464714  | 1.02       | 0.310              | .0746397 |
| ICV_volM2    | .0024447    | .0002924  | 8.36       | 0.000              | .8331367 |
| _cons        | 828.5139    | 416.0545  | 1.99       | 0.049              | •        |

51 . 52 . //ANALYSIS C// note: Race omitted because of collinearity.

| Source           | SS          | df        | MS         | Number of obs   | = | 117     |
|------------------|-------------|-----------|------------|-----------------|---|---------|
|                  |             |           |            | F(6, 110)       | = | 2.17    |
| Model            | 202.245862  | 6         | 33.7076436 | Frob > F        | = | 0.0512  |
| Residual         | 1708.5517   | 110       | 15.5322882 | 2 R-squared     | = | 0.1058  |
|                  |             |           |            | - Adj R-squared | = | 0.0571  |
| Total            | 1910.79756  | 116       | 16.4723928 | B Root MSE      | = | 3.9411  |
| <br>LnLesion_V~e | Coefficient | Std. err. | t          | P> t            |   | Beta    |
| LnNFLw1          | 2.527642    | .9190924  | 2.75       | 0.007           |   | 3056554 |
| Sex              | .0927673    | 1.023201  | 0.09       | 0.928           |   | 0114065 |
| w1Age            | 0183607     | .0521139  | -0.35      | 0.725           |   | 0386617 |
| Race             | 0           | (omitted) |            |                 |   |         |
| PovStat          | 1.819022    | .8677077  | 2.10       | 0.038           |   | 2006421 |
| TIME_V1SCAN      | 0005381     | .0005819  | -0.92      | 0.357           |   | 0881706 |
| ICV_volM2        | 1.51e-06    | 3.66e-06  | 0.41       | 0.680           |   | .053285 |
| _cons            | -2.390287   | 5.226424  | -0.46      | 0.648           |   | •       |

54 .

55 .

56 . \*\*Model 2\*\*

57 .

58 . use finaldata\_imputed,clear

59 . 60 .

61 .

62 . //ANALYSIS B//

63 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

| Multiple-imputation estimates  | Imputations          | = | 5      |
|--------------------------------|----------------------|---|--------|
| Linear regression              | Number of obs        | = | 119    |
|                                | Average RVI          | = | 0.0000 |
|                                | Largest FMI          | = | 0.0000 |
|                                | Complete DF          | = | 111    |
| DF adjustment: Small sample    | DF: min              | = | 109.05 |
|                                | avg                  | = | 109.05 |
|                                | max                  | = | 109.05 |
| Model F test: <b>Equal FMI</b> | F( <b>7, 109.1</b> ) | = | 10.39  |
| Within VCE type: OLS           | Prob > F             | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | -55.55587   | 68.77571  | -0.81 | 0.421 | -191.8664  | 80.75461  |
| Sex          | -57.96438   | 80.50176  | -0.72 | 0.473 | -217.5154  | 101.5866  |
| w1Age        | -1.939798   | 3.930978  | -0.49 | 0.623 | -9.730827  | 5.85123   |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -20.22466   | 66.98955  | -0.30 | 0.763 | -152.9951  | 112.5457  |
| TIME_V1SCAN  | .0185569    | .0458573  | 0.40  | 0.687 | 0723303    | .1094441  |
| w1BMI        | 2.093469    | 4.197687  | 0.50  | 0.619 | -6.226165  | 10.4131   |
| ICV_volM2    | .001834     | .0002864  | 6.40  | 0.000 | .0012665   | .0024016  |
| _cons        | 1324.514    | 438.8472  | 3.02  | 0.003 | 454.7378   | 2194.29   |

64 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

| Nultiple-imputation estimates                             |  |   |  | Imputations                               |  |                            | 5   |
|---|--|---|--|---|--|----------------------------|---|
| _inear regress  | sion   |   |  | Number                                    | of obs   | =                          | 119   |
|   |  |   |  | Average                                   | RVI  | =                          | 0.0000  |
|   |  |   |  | Largest                                   | FMI  | =                          | 0.0000  |
|   |  |   |  | Complet                                   | e DF   | =                          | 111   |
| OF adjustment:  | : Small samp   | le  |  | DF:                                       | min  | =                          | 109.05  |
|   |  |   |  |   | avg  | =                          | 109.05  |
|   |  |   |  |   | max  | =                          | 109.05  |
| Model F test:   | Equal F  | MI  |  | F( <b>7</b> ,                             | 109.1)   | =                          | 14.10   |
| Within VCE typ  | oe: O  | LS  |  | Prob >                                    | F  | =                          | 0.0000  |
| Dight Winn c  | Coofficient  | C+d onn   |  | n. l+1                                    | [OF% c/  |                            | intonvall   |
| Right_Hipp~s  | Coefficient  |   | t                                      | P> t                                      |  |                            | interval]   |
| LnNFLw1   | -55.63566  | 69.95595  | -0.80                                  | 0.428                                     | -194.28  | 53                         | 83.014  |
|   | -55.63566<br>-173.5909   | 69.95595<br>81.88322  | -0.80<br>-2.12                         | 0.428<br>0.036                            | -194.28!<br>-335.87                              | 53<br>99                   | 83.014<br>-11.30187                                     |
| LnNFLw1   | -55.63566  | 69.95595<br>81.88322<br>3.998436                                      | -0.80                                  | 0.428                                     | -194.28  | 53<br>99                   | 83.014  |
| LnNFLw1<br>Sex  | -55.63566<br>-173.5909   | 69.95595<br>81.88322  | -0.80<br>-2.12                         | 0.428<br>0.036                            | -194.28!<br>-335.87                              | 53<br>99                   | 83.014<br>-11.30187                                     |
| LnNFLw1<br>Sex<br>w1Age<br>Race<br>PovStat                | -55.63566<br>-173.5909<br>1.098294                             | 69.95595<br>81.88322<br>3.998436<br>(omitted)<br>68.13913             | -0.80<br>-2.12<br>0.27                 | 0.428<br>0.036<br>0.784<br>0.869          | -194.28!<br>-335.87                              | 53<br>99<br>33             | 83.014<br>-11.30187<br>9.023022<br>146.2709             |
| LnNFLw1<br>Sex<br>w1Age<br>Race                           | -55.63566<br>-173.5909<br>1.098294                             | 69.95595<br>81.88322<br>3.998436<br>(omitted)                         | -0.80<br>-2.12<br>0.27                 | 0.428<br>0.036<br>0.784                   | -194.28<br>-335.87<br>-6.8264                    | 53<br>99<br>33             | 83.014<br>-11.30187<br>9.023022                         |
| LnNFLw1<br>Sex<br>w1Age<br>Race<br>PovStat                | -55.63566<br>-173.5909<br>1.098294<br>0<br>11.2221             | 69.95595<br>81.88322<br>3.998436<br>(omitted)<br>68.13913             | -0.80<br>-2.12<br>0.27                 | 0.428<br>0.036<br>0.784<br>0.869          | -194.28<br>-335.87<br>-6.8264                    | 53<br>99<br>33<br>67<br>23 | 83.014<br>-11.30187<br>9.023022<br>146.2709             |
| LnNFLw1<br>Sex<br>w1Age<br>Race<br>PovStat<br>TIME_V1SCAN | -55.63566<br>-173.5909<br>1.098294<br>0<br>11.2221<br>.0552238 | 69.95595<br>81.88322<br>3.998436<br>(omitted)<br>68.13913<br>.0466442 | -0.80<br>-2.12<br>0.27<br>0.16<br>1.18 | 0.428<br>0.036<br>0.784<br>0.869<br>0.239 | -194.28<br>-335.87<br>-6.8264<br>-123.82<br>0372 | 53<br>99<br>33<br>67<br>23 | 83.014<br>-11.30187<br>9.023022<br>146.2709<br>.1476707 |

<sup>65 .</sup> 

ICV\_volM2

\_cons

Multiple-imputation estimates

Imputations

|                |                  | _         |               |           |             |
|----------------|------------------|-----------|---------------|-----------|-------------|
| Linear regress | sion             |           | Number o      | of obs =  | 117         |
|                |                  |           | Average       | RVI =     | 0.0000      |
|                |                  |           | Largest       | FMI =     | 0.0000      |
|                |                  |           | Complete      | DF =      | 109         |
| DF adjustment  | : Small sample   |           | DF:           | min =     | 107.05      |
|                |                  |           |               | avg =     | 107.05      |
|                |                  |           |               | max =     | 107.05      |
| Model F test:  | Equal FMI        |           | F( <b>7</b> , | 107.1) =  | 1.90        |
| Within VCE typ | oe: OLS          |           | Prob > F      | =         | 0.0762      |
| LnLesion_V~e   | Coefficient Std. | err. t    | P> t          | [95% conf | . interval] |
| LnNFLw1        | 2.565906 .9239   | 194 2.78  | 0.006         | .7343544  | 4.397458    |
| Sex            | .1725733 1.034   | 605 0.17  | 0.868         | -1.878399 | 2.223545    |
| w1Age          | 0177909 .0522    | 732 -0.34 | 0.734         | 1214159   | .0858341    |
| Race           | Ø (omitt         | ed)       |               |           |             |
| PovStat        | 1.818314 .8702   | 196 2.09  | 0.039         | .0932147  | 3.543413    |
| TIME_V1SCAN    | 0004919 .0005    | 885 -0.84 | 0.405         | 0016586   | .0006747    |
| w1BMI          | .0328277 .0542   | 574 0.61  | 0.546         | 0747307   | .1403862    |
|                |                  |           |               |           |             |

0.41 0.685

-0.65 0.519

-5.78e-06

-14.8141

8.77e-06

7.5289

1.49e-06 3.67e-06

-3.642598 5.635419

<sup>66 . //</sup>ANALYSIS C//

<sup>67 .</sup> mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

68 . 69 . save, replace

file **finaldata\_imputed.dta** saved

70 .

71 . 72 .

73 . //INTERACTION BY Race//

74 .

75 . 76 . //ANALYSIS B// mi estimate: re 77 . mi estimate: reg Left\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputation estimates  | Imputations   | = | 5      |
|--------------------------------|---------------|---|--------|
| Linear regression              | Number of obs | = | 200    |
|                                | Average RVI   | = | 0.0000 |
|                                | Largest FMI   | = | 0.0000 |
|                                | Complete DF   | = | 190    |
| DF adjustment: Small sample    | DF: min       | = | 188.03 |
|                                | avg           | = | 188.03 |
|                                | max           | = | 188.03 |
| Model F test: <b>Equal FMI</b> | F( 9, 188.0)  | = | 16.78  |
| Within VCE type: OLS           | Prob > F      | = | 0.0000 |

| Left_Hippoca~s          | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|-------------------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1                 | -39.66908   | 60.68152  | -0.65 | 0.514 | -159.3731  | 80.03496  |
| Race<br>AfrAm           | -150.8539   | 169.7475  | -0.89 | 0.375 | -485.7081  | 184.0003  |
| Race#c.LnNFLw1<br>AfrAm | 40.61499    | 83.52545  | 0.49  | 0.627 | -124.1524  | 205.3823  |
| Sex                     | -40.50441   | 57.99876  | -0.70 | 0.486 | -154.9163  | 73.90746  |
| w1Age                   | -4.661518   | 2.793602  | -1.67 | 0.097 | -10.17235  | .84931    |
| Race                    | 0           | (omitted) |       |       |            |           |
| PovStat                 | -82.02332   | 48.65     | -1.69 | 0.093 | -177.9933  | 13.94662  |
| TIME V1SCAN             | .0041923    | .0353062  | 0.12  | 0.906 | 0654549    | .0738395  |
| w1BMI                   | .0680504    | 3.271155  | 0.02  | 0.983 | -6.384827  | 6.520928  |
| ICV volM2               | .0017375    | .0002138  | 8.13  | 0.000 | .0013158   | .0021593  |
| _cons                   | 1696.152    | 320.1168  | 5.30  | 0.000 | 1064.67    | 2327.633  |

78 . mi estimate: reg Right\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputation estimates      | Imputations          | = | 5      |
|------------------------------------|----------------------|---|--------|
| Linear regression                  | Number of obs        | = | 200    |
|                                    | Average RVI          | = | 0.0000 |
|                                    | Largest FMI          | = | 0.0000 |
|                                    | Complete DF          | = | 190    |
| DF adjustment: <b>Small sample</b> | DF: min              | = | 188.03 |
|                                    | avg                  | = | 188.03 |
|                                    | max                  | = | 188.03 |
| Model F test: <b>Equal FMI</b>     | F( <b>9, 188.0</b> ) | = | 20.56  |
| Within VCE type: OLS               | Prob > F             | = | 0.0000 |

| Right_Hippoc~s          | Coefficient            | Std. err.             | t              | P> t           | [95% conf.             | interval]            |
|-------------------------|------------------------|-----------------------|----------------|----------------|------------------------|----------------------|
| LnNFLw1                 | -31.92025              | 61.34116              | -0.52          | 0.603          | -152.9255              | 89.08504             |
| Race<br>AfrAm           | -154.3192              | 171.5927              | -0.90          | 0.370          | -492.8135              | 184.175              |
| Race#c.LnNFLw1<br>AfrAm | 39.03686               | 84.43341              | 0.46           | 0.644          | -127.5216              | 205.5953             |
| Sex<br>w1Age            | -107.7588<br>-2.791662 | 58.62924<br>2.82397   | -1.84<br>-0.99 | 0.068<br>0.324 | -223.4144<br>-8.362397 | 7.896778<br>2.779072 |
| Race<br>PovStat         | 0<br>-62.1678          | (omitted)<br>49.17885 | -1.26          | 0.208          | -159.181               | 34.84538             |
| TIME_V1SCAN<br>w1BMI    | .0318593<br>1.227189   | .03569<br>3.306714    | 0.89<br>0.37   | 0.373<br>0.711 | 038545<br>-5.295835    | .1022637             |
| ICV_volM2<br>_cons      | .0021268<br>1349.452   | .0002161              | 9.84<br>4.17   | 0.000<br>0.000 | .0017005<br>711.1056   | .0025531             |

<sup>79 .</sup> 

<sup>80 . //</sup>ANALYSIS C// 81 . mi estimate: reg LnLesion\_Volume c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputat  | tion estimates | 5         |       | Imputatio | ns                                      | =     | 5         |
|-------------------|----------------|-----------|-------|-----------|---|-------|-----------|
| Linear regression | on             |           |       | Number of | obs                                     | =     | 197       |
|                   |                |           |       | Average R | VI                                      | =     | 0.0000    |
|                   |                |           |       | Largest F | MI                                      | =     | 0.0000    |
|                   |                |           |       | Complete  | DF                                      | =     | 187       |
| DF adjustment:    | Small sample   | 2         |       | DF: m     | in                                      | =     | 185.03    |
| _                 |                |           |       | a         | vg                                      | =     | 185.03    |
|                   |                |           |       | m         | ax                                      | =     | 185.03    |
| Model F test:     | Equal FM       | [         |       | F( 9,     | 185.0)                                  | =     | 2.57      |
| Within VCE type:  | . OLS          | 5         |       | Prob > F  | ·                                       | =     | 0.0084    |
| <b>,</b>          |                |           |       |           |   |       |           |
| LnLesion_Vol~e    | Coefficient    | Std. err. | t     | P> t      | [95%                                    | conf. | interval] |
| LnNFLw1           | 2.165116       | .7626427  | 2.84  | 0.005     | .660                                    | 5224  | 3.669709  |
| Race              |                |           |       |           |   |       |           |
| AfrAm             | 1.405384       | 2.080321  | 0.68  | 0.500     | -2.69                                   | 8815  | 5.509582  |
| 711.71            |                |           |       | 0.200     | _,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |       | 21202202  |
| Race#c.LnNFLw1    |                |           |       |           |   |       |           |
| AfrAm             | 1426499        | 1.028162  | -0.14 | 0.890     | -2.17                                   | 1077  | 1.885778  |
|                   |                |           |       |           |   |       |           |
| Sex               | .5287551       | .7069273  | 0.75  | 0.455     | 865                                     | 9189  | 1.923429  |
| w1Age             | .0081189       | .0347285  | 0.23  | 0.815     | 060                                     | 3959  | .0766337  |
| Race              | 0              | (omitted) |       |           |   |       |           |
| PovStat           | .8443423       | .596086   | 1.42  | 0.158     | 331                                     | 6565  | 2.020341  |
| TIME V1SCAN       | 0005157        | .0004283  | -1.20 | 0.230     | 001                                     | 3607  | .0003293  |
| w1BMI             | .0468205       | .0398771  | 1.17  | 0.242     | 031                                     | 8518  | .1254928  |
| ICV volM2         | 1.74e-06       | 2.60e-06  | 0.67  | 0.504     | -3.38                                   | e-06  | 6.86e-06  |
| cons              | -4.035512      | 3.883357  | -1.04 | 0.300     | -11.6                                   | 9686  | 3.625837  |
| <del>-</del>      |                |           |       |           |   |       |           |

| Multiple-imputation estimates Linear regression |              | Imputations<br>Number of obs | = | 5<br>81 |
|---|--------------|------------------------------|---|---------|
|   |              | Average RVI                  | = | 0.0069  |
|   |              | Largest FMI                  | = | 0.0624  |
|   |              | Complete DF                  | = | 71      |
| DF adjustment: 5                                | Small sample | DF: min                      | = | 61.59   |
|   |              | avg                          | = | 68.01   |
|   |              | max                          | = | 69.07   |
| Model F test:                                   | Equal FMI    | F( 9, 69.0)                  | = | 7.09    |
| Within VCE type:                                | OLS          | Prob > F                     | = | 0.0000  |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 16.30067    | 79.96206  | 0.20  | 0.839 | -143.2222  | 175.8236  |
| Sex          | -45.22829   | 82.96368  | -0.55 | 0.587 | -210.7459  | 120.2893  |
| w1Age        | -8.514048   | 4.631177  | -1.84 | 0.070 | -17.75323  | .7251353  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -194.0311   | 75.79359  | -2.56 | 0.013 | -345.2324  | -42.82974 |
| TIME_V1SCAN  | .0038899    | .058296   | 0.07  | 0.947 | 1124078    | .1201877  |
| w1BMI        | -2.016779   | 5.613319  | -0.36 | 0.720 | -13.21498  | 9.18142   |
| w1dxDiabetes | -60.49845   | 63.64213  | -0.95 | 0.346 | -187.7341  | 66.73716  |
| w1Glucose    | 3.720928    | 1.835946  | 2.03  | 0.047 | .0565498   | 7.385307  |
| ICV_volM2    | .0016533    | .0003342  | 4.95  | 0.000 | .0009865   | .0023202  |
| _cons        | 1691.386    | 459.8057  | 3.68  | 0.000 | 774.1123   | 2608.66   |

98 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_vol

| Multiple-imputati | on estimates | Imputati      | ons    | = | 5      |
|-------------------|--------------|---------------|--------|---|--------|
| Linear regression |              | Number o      | of obs | = | 81     |
|                   |              | Average       | RVI    | = | 0.0008 |
|                   |              | Largest       | FMI    | = | 0.0043 |
|                   |              | Complete      | DF     | = | 71     |
| DF adjustment:    | Small sample | DF:           | min    | = | 68.82  |
|                   |              |               | avg    | = | 68.99  |
|                   |              |               | max    | = | 69.07  |
| Model F test:     | Equal FMI    | F( <b>9</b> , | 69.1)  | = | 9.48   |
| Within VCE type:  | OLS          | Prob > F      |        | = | 0.0000 |
|                   |              |               |        |   |        |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 1.372797    | 72.89382  | 0.02  | 0.985 | -144.0463  | 146.7919  |
| Sex          | -64.79417   | 75.57622  | -0.86 | 0.394 | -215.5658  | 85.97749  |
| w1Age        | -6.621004   | 4.22141   | -1.57 | 0.121 | -15.04252  | 1.800508  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -174.0174   | 69.13442  | -2.52 | 0.014 | -311.9345  | -36.10031 |
| TIME_V1SCAN  | .0238296    | .0531443  | 0.45  | 0.655 | 0821888    | .129848   |
| w1BMI        | -5.904334   | 5.120753  | -1.15 | 0.253 | -16.11996  | 4.311292  |
| w1dxDiabetes | -46.11816   | 56.41125  | -0.82 | 0.416 | -158.6606  | 66.42431  |
| w1Glucose    | 5.071438    | 1.658087  | 3.06  | 0.003 | 1.763648   | 8.379227  |
| ICV_volM2    | .0017402    | .0003041  | 5.72  | 0.000 | .0011337   | .0023468  |
| _cons        | 1729.041    | 419.365   | 4.12  | 0.000 | 892.445    | 2565.637  |

100 . //ANALYSIS C//

101 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM2

| Multiple-imputation estimates |                                      | Imputati      | ons    | =     | 5      |
|-------------------------------|--------------------------------------|---------------|--------|-------|--------|
| Linear regression             |                                      | Number o      | of obs | =     | 80     |
|                               |                                      | Average       | RVI    | =     | 0.0016 |
|                               |                                      | Largest       | FMI    | =     | 0.0171 |
|                               |                                      | Complete      | DF     | =     | 70     |
| DF adjustment: Sr             | ustment: <b>Small sample</b> DF: min |               | =      | 66.72 |        |
| _                             |                                      |               | avg    | =     | 67.88  |
|                               |                                      |               | max    | =     | 68.08  |
| Model F test:                 | Equal FMI                            | F( <b>9</b> , | 68.1)  | =     | 2.00   |
| Within VCE type:              | OLS                                  | Prob > F      |        | =     | 0.0520 |
|                               |                                      |               |        |       |        |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 1.995662    | .8653616  | 2.31  | 0.024 | .2688578   | 3.722467  |
| Sex          | .7709582    | .9049816  | 0.85  | 0.397 | -1.034868  | 2.576784  |
| w1Age        | .002446     | .0504966  | 0.05  | 0.962 | 0983186    | .1032106  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 4140335     | .8205288  | -0.50 | 0.615 | -2.051338  | 1.22327   |
| TIME V1SCAN  | 0005425     | .0006325  | -0.86 | 0.394 | 0018047    | .0007197  |
| w1BMI        | .0767438    | .0607725  | 1.26  | 0.211 | 0445233    | .1980109  |
| w1dxDiabetes | 0331254     | .6749749  | -0.05 | 0.961 | -1.380484  | 1.314233  |
| w1Glucose    | 0066426     | .019724   | -0.34 | 0.737 | 0460048    | .0327196  |
| ICV volM2    | 3.95e-06    | 3.62e-06  | 1.09  | 0.279 | -3.27e-06  | .0000112  |
| _cons        | -3.917095   | 4.981802  | -0.79 | 0.434 | -13.85791  | 6.023719  |

102

103 . save, replace

file finaldata\_imputed.dta saved

104 .

105 .

107 . //Whites//

108 .

109 . use finaldata\_imputed,clear

Multiple-imputation estimates

110 .

111 .

112 . //ANALYSIS B//

Linear regression

113 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM

Imputations
Number of obs

| DF adjustment  |             | Average Largest Complete DF:  F( 9, | FMI<br>P DF<br>min<br>avg<br>max | = = = = = | 0.0002<br>0.0013<br>109<br>106.95<br>107.03<br>107.05<br>8.15 |      |           |
|----------------|-------------|-------------------------------------|----------------------------------|-----------|---|------|-----------|
| Within VCE typ | pe: C       | DLS                                 |                                  | Prob > 1  |   | =    | 0.0000    |
| Left_Hippo~s   | Coefficient | Std. err.                           | t                                | P> t      | [95% c  | onf. | interval] |
| LnNFLw1        | -69.75754   | 74.40006                            | -0.94                            | 0.351     | -217.24   | 77   | 77.73266  |
| Sex            | -69.4338    | 81.99348                            | -0.85                            | 0.399     | -231.97   | 55   | 93.1079   |
| w1Age          | -2.549905   | 4.010856                            | -0.64                            | 0.526     | -10.500   | 97   | 5.401156  |
| Race           | 0           | (omitted)                           |                                  |           |   |      |           |
| PovStat        | -31.93015   | 68.09438                            | -0.47                            | 0.640     | -166.91   | 86   | 103.0582  |
| TIME_V1SCAN    | .0298941    | .0472003                            | 0.63                             | 0.528     | 06367   | 45   | .1234627  |
| w1BMI          | .5581775    | 4.52286                             | 0.12                             | 0.902     | -8.4078   | 14   | 9.524169  |
| w1dxDiabetes   | 61.89274    | 64.54064                            | 0.96                             | 0.340     | -66.05  | 09   | 189.8364  |
| w1Glucose      | 3297791     | 1.419335                            | -0.23                            | 0.817     | -3.143  | 43   | 2.483872  |
| ICV_volM2      | .0018186    | .0002889                            | 6.29                             | 0.000     | .00124  | 59   | .0023913  |
| _cons          | 1468.699    | 470.0835                            | 3.12                             | 0.002     | 536.81  | 87   | 2400.58   |
|                |             |                                     |                                  |           |   |      |           |

114 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_vol

| Multiple-imput<br>Linear regress | Number                      | <pre>Imputations = Number of obs = Average RVI =</pre> |       |               |                       |     |                 |
|----------------------------------|-----------------------------|--|-------|---------------|-----------------------|-----|-----------------|
|                                  | DE adjustment. Small comple |  |       |               |                       | =   | 0.0084          |
| DF adjustment:                   | : Small samp                | оте  |       | DF:           | min                   | =   | 106.02          |
|                                  |                             |  |       |               | avg                   | =   | 106.90          |
| Model F test:                    | Equal F                     | мт   |       | F( <b>9</b> , | max<br><b>107.0</b> ) | =   | 107.05<br>10.93 |
| Within VCE typ                   | •                           | )LS  |       | Prob >        | •                     | =   | 0.0000          |
|                                  |                             |  |       |               | •                     |     |                 |
| Right_Hipp~s                     | Coefficient                 | Std. err.  | t     | P> t          | [95% co               | nf. | interval]       |
| LnNFLw1                          | -70.45606                   | 75.79415   | -0.93 | 0.355         | -220.709              | 5   | 79.79736        |
| Sex                              | -184.2771                   | 83.54261   | -2.21 | 0.030         | -349.889              | 9   | -18.6643        |
| w1Age                            | .6433441                    | 4.085416   | 0.16  | 0.875         | -7.45547              | 3   | 8.742162        |
| Race                             | 0                           | (omitted)  |       |               |                       |     |                 |
| PovStat                          | 1.330888                    | 69.38234   | 0.02  | 0.985         | -136.210              | 9   | 138.8727        |
| TIME_V1SCAN                      | .0648527                    | .0480998   | 1.35  | 0.180         | 030499                | 5   | .1602049        |
| w1BMI                            | 4.473237                    | 4.608747   | 0.97  | 0.334         | -4.66304              | 2   | 13.60952        |
| w1dxDiabetes                     | 48.28919                    | 66.01909   | 0.73  | 0.466         | -82.5997              |     | 179.1781        |
| w1Glucose                        | 1157011                     | 1.447829   | -0.08 | 0.936         | -2.98592              |     | 2.754519        |
| ICV_volM2                        | .0024301                    | .0002944   | 8.26  | 0.000         | .001846               |     | .0030136        |
| _cons                            | 710.4162                    | 479.1  | 1.48  | 0.141         | -239.345              | 5   | 1660.178        |

DF adjustment:

Model F test:

Within VCE type:

Small sample

Equal FMI

**OLS** 

115 . 116 . //ANALYSIS C// 117 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM2 Multiple-imputation estimates Imputations Linear regression Number of obs 117 Average RVI 0.0000 Largest FMI 0.0000 = Complete DF 107 DF adjustment: Small sample min 105.05 105.05 avg 105.05 max = Model F test: F( 9, 105.1) Equal FMI 1.58 Within VCE type: **OLS** Prob > F 0.1315 Coefficient Std. err. P>|t| [95% conf. interval] LnLesion\_V~e t LnNFLw1 2.931634 1.011654 2.90 0.005 .9257231 4.937546 Sex .3608959 1.056203 0.34 0.733 -1.733347 2.455138 w1Age -.0177677 .0534518 -0.33 0.740 -.123752 .0882167 Race 0 (omitted) PovStat 1.925842 .8832543 2.18 0.031 .174522 3.677161 TIME\_V1SCAN -.0006053 .0006062 -1.00 0.320 -.0018072 .0005967 .0535274 0.92 w1BMI .0584787 0.362 -.0624242 .1694791 w1dxDiabetes -.2934559 .8375572 -0.35 0.727 -1.954167 1.367255 0.633 w1Glucose -.008859 .0185235 -0.48 -.0455874 .0278694 ICV volM2 1.40e-06 3.71e-06 0.38 0.707 -5.95e-06 8.75e-06 \_cons 7.940701 -4.059334 6.052056 -0.67 0.504 -16.05937 118 . 119 . save, replace file finaldata\_imputed.dta saved 120 . 122 . //INTERACTION by Race// 123 . 124 . 125 . 126 . //ANALYSIS B// 127 . mi estimate: reg Left\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose Multiple-imputation estimates Imputations 5 Linear regression Number of obs 200 Average RVI 0.0031

Largest FMI Complete DF

min

avg

max

F( 11, 186.0)

Prob > F

0.0335

171.79

184.44 186.03

13.88

0.0000

188

| Left_Hippoca~s          | Coefficient           | Std. err.                 | t             | P> t           | [95% conf.            | interval]            |
|-------------------------|-----------------------|---------------------------|---------------|----------------|-----------------------|----------------------|
| LnNFLw1                 | -68.60745             | 64.16251                  | -1.07         | 0.286          | -195.1872             | 57.97226             |
| Race<br>AfrAm           | -210.3717             | 174.7946                  | -1.20         | 0.230          | -555.2071             | 134.4636             |
| Race#c.LnNFLw1<br>AfrAm | 72.84339              | 86.44778                  | 0.84          | 0.401          | -97.70103             | 243.3878             |
| Sex                     | -53.4182              | 58.70793                  | -0.91         | 0.364          | -169.2372             | 62.40077             |
| w1Age<br>Race           | -4.732657<br>0        | <b>2.862644</b> (omitted) | -1.65         | 0.100          | -10.38013             | .9148213             |
| PovStat<br>TIME V1SCAN  | -87.28042<br>.0104429 | 48.79353<br>.0358797      | -1.79<br>0.29 | 0.075<br>0.771 | -183.5402<br>0603409  | 8.9794<br>.0812266   |
| w1BMI<br>w1dxDiabetes   | -1.262515<br>11.79626 | 3.399058<br>44.83446      | -0.37<br>0.26 | 0.711<br>0.793 | -7.968179<br>-76.7011 | 5.443149<br>100.2936 |
| w1Glucose               | 1.033388              | 1.097566                  | 0.94          | 0.348          | -1.132182             | 3.198958             |
| ICV_volM2<br>_cons      | .0017454<br>1691.754  | .0002138<br>329.6329      | 8.16<br>5.13  | 0.000<br>0.000 | .0013236<br>1041.446  | .0021672<br>2342.061 |

128 . mi estimate: reg Right\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose

| Multiple-imputat<br>Linear regression |              |           |       | Imputat:       |        | =     | 5<br>200  |
|---------------------------------------|--------------|-----------|-------|----------------|--------|-------|-----------|
|                                       |              |           |       | Average        | RVI    | =     | 0.0005    |
|                                       |              |           |       | Largest        |        | =     | 0.0049    |
|                                       |              |           |       | Complete       |        | =     | 188       |
| DF adjustment:                        | Small sample | !         |       | DF:            | min    | =     | 184.97    |
| 3                                     | •            |           |       |                | avg    | =     | 185.89    |
|                                       |              |           |       |                | max    | =     | 186.03    |
| Model F test:                         | Equal FMI    |           |       | F( <b>11</b> , | 186.0) | =     | 17.43     |
| Within VCE type:                      | OLS          | •         |       | Prob >         | •      | =     | 0.0000    |
| Right_Hippoc~s                        | Coefficient  | Std. err. | t     | P> t           | [95%   | conf. | interval] |
| LnNFLw1                               | -72.89682    | 64.46954  | -1.13 | 0.260          | -200.  | 2022  | 54.28861  |
| LIMELWI                               | -72.89082    | 04.40334  | -1.15 | 0.200          | -200.  | 0622  | 34.28801  |
| Race                                  |              |           |       |                |        |       |           |
| AfrAm                                 | -241.941     | 175.6117  | -1.38 | 0.170          | -588.  | 3879  | 104.5059  |
| Race#c.LnNFLw1                        |              |           |       |                |        |       |           |
| AfrAm                                 | 86.22406     | 86.85408  | 0.99  | 0.322          | -85.1  | 2171  | 257.5698  |
| Sex                                   | -126.9382    | 58.98743  | -2.15 | 0.033          | -243.  | 3085  | -10.56786 |
| w1Age                                 | -2.990739    | 2.874419  | -1.04 | 0.299          | -8.66  | 1393  | 2.679916  |
| Race                                  | 0            | (omitted) |       |                |        |       |           |
| PovStat                               | -70.01825    | 49.02586  | -1.43 | 0.155          | -166.  | 7364  | 26.69989  |
| TIME_V1SCAN                           | .0416696     | .0360399  | 1.16  | 0.249          | 029    | 4299  | .1127691  |
| w1BMI                                 | 7293698      | 3.41499   | -0.21 | 0.831          | -7.46  | 6455  | 6.007716  |
| w1dxDiabetes                          | 23.80691     | 44.41398  | 0.54  | 0.593          | -63.8  | 1618  | 111.43    |
| w1Glucose                             | 1.373357     | 1.096657  | 1.25  | 0.212          | 790    | 1517  | 3.536867  |
| ICV_volM2                             | .0021392     | .0002149  | 9.96  | 0.000          | .001   | 7153  | .002563   |
| _cons                                 | 1354.719     | 330.9622  | 4.09  | 0.000          | 701.   | 7955  | 2007.642  |

130 . //ANALYSIS C//

Multiple-imputation estimates

131 . mi estimate: reg LnLesion\_Volume c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose I

Imputations

| Marcipic impacat  | LION CICINACCI | •         |       | Impucac. | 10113  | _     | ,         |
|-------------------|----------------|-----------|-------|----------|--------|-------|-----------|
| Linear regression | on             |           |       | Number o | of obs | =     | 197       |
|                   |                |           |       | Average  | RVI    | =     | 0.0002    |
|                   |                |           |       | Largest  | FMI    | =     | 0.0020    |
|                   |                |           |       | Complete | e DF   | =     | 185       |
| DF adjustment:    | Small sample   | <u> </u>  |       | DF:      | min    | =     | 182.67    |
| _                 |                |           |       |          | avg    | =     | 182.99    |
|                   |                |           |       |          | max    | =     | 183.03    |
| Model F test:     | Equal FMI      | [         |       | F( 11,   | 183.0) | =     | 2.20      |
| Within VCE type:  | : OLS          | ;         |       | Prob > 1 | F      | =     | 0.0163    |
|                   |                |           |       |          |        |       |           |
| LnLesion_Vol~e    | Coefficient    | Std. err. | t     | P> t     | [95%   | conf. | interval] |
| LnNFLw1           | 2.433389       | .8152942  | 2.98  | 0.003    | .824   | 8056  | 4.041972  |
| Race              |                |           |       |          |        |       |           |
| AfrAm             | 1.982591       | 2.151566  | 0.92  | 0.358    | -2.26  | 2471  | 6.227652  |
| Race#c.LnNFLw1    |                |           |       |          |        |       |           |
| AfrAm             | 4507097        | 1.069018  | -0.42 | 0.674    | -2.55  | 9892  | 1.658473  |
| Sex               | .650437        | .7173772  | 0.91  | 0.366    | 764    | 9558  | 2.06583   |
| w1Age             | .0092936       | .0356859  | 0.26  | 0.795    | 061    |       | .0797023  |
| Race              | 0              | (omitted) | 0.20  | 01,755   |        |       | .0,5,025  |
| PovStat           | .8907394       | .5989802  | 1.49  | 0.139    | 291    | 0543  | 2.072533  |
| TIME_V1SCAN       | 0005817        | .0004362  | -1.33 | 0.184    |        |       | .0002789  |
| w1BMI             | .0590665       | .0415249  | 1.42  | 0.157    | 022    |       | .1409956  |
| w1dxDiabetes      | 1877194        | .5400379  | -0.35 | 0.729    | -1.25  |       | .8777947  |
| w1Glucose         | 0077867        | .0134098  | -0.58 | 0.562    | 034    |       | .0186712  |
| ICV volM2         | 1.66e-06       | 2.60e-06  | 0.64  | 0.524    |        | _     | 6.80e-06  |
| cons              | -4.145647      | 4.005548  | -1.03 | 0.302    | -12.0  |       | 3.757343  |
|                   |                | _         |       |          |        |       | _         |

132 .

133 . save, replace
 file finaldata\_imputed.dta saved

134 .

134 .

136 . \*\*\*\*\*\*\*\*\*MODEL 4: MODEL 2+liver/kidney disease\*\*\*\*\*

137 .

138 . //AFRICAN-AMERICAN//

139 .

140 . use finaldata\_imputed,clear

141 .

142 .

143 .

144 . //ANALYSIS B//

145 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

|                     | Multiple-imputation estimates<br>inear regression |           |       |          | ons<br>f obs | =     | 5<br>81   |
|---------------------|---|-----------|-------|----------|--------------|-------|-----------|
|                     |   |           |       | Average  |              | =     | 0.1092    |
|                     |   |           |       | Largest  |              | =     | 0.5973    |
| DE - 44++.          |   | 1.        |       | Complete |              | =     | 68        |
| DF adjustment:      | : Small samp                                      | те        |       |          | min          | =     | 9.61      |
|                     |   |           |       |          | avg          | =     | 56.67     |
| M. d. 1. F. J. a. J |   |           |       |          | max          | =     | 65.52     |
| Model F test:       | Equal F   |           |       | F( 11,   | ,            |       | 4.58      |
| Within VCE typ      | oe: C   | OLS       |       | Prob > F |              | =     | 0.0000    |
| Left_Hippo~s        | Coefficient                                       | Std. err. | t     | P> t     | [95%         | conf. | interval] |
| LnNFLw1             | 33.46147  | 84.41544  | 0.40  | 0.693    | -135.        | 542   | 202.4649  |
| Sex                 | -53.00788   | 115.4489  | -0.46 | 0.648    | -285.6       | 792   | 179.6635  |
| w1Age               | -9.675144   | 5.231281  | -1.85 | 0.069    | -20.1        | 217   | .7714158  |
| Race                | 0   | (omitted) |       |          |              |       |           |
| PovStat             | -182.8743   | 81.02508  | -2.26 | 0.027    | -344.7       | 214   | -21.02725 |
| TIME_V1SCAN         | .0046355  | .0639753  | 0.07  | 0.942    | 1233         | 754   | .1326464  |
| w1BMI               | 1440811   | 6.300925  | -0.02 | 0.982    | -12.72       | 601   | 12.43785  |
| w1Creatinine        | 120.8135  | 233.3229  | 0.52  | 0.616    | -401.9       | 336   | 643.5605  |
| w1USpecGrav         | -3974.893   | 4993.017  | -0.80 | 0.429    | -13947       | .49   | 5997.707  |
| w1BUN               | 8542727   | 11.14496  | -0.08 | 0.939    | -23.17       | 745   | 21.4689   |
| w1ALP               | .0979386  | 1.693175  | 0.06  | 0.954    | -3.287       | 067   | 3.482945  |
| w1UricAcid          | -7.442643   | 28.39302  | -0.26 | 0.794    | -64.22       | 087   | 49.33558  |
| ICV_volM2           | .0017715  | .0003633  | 4.88  | 0.000    | .0010        | 454   | .0024976  |
| cons                | 5820.48   | 5116.41   | 1.14  | 0.259    | -4396.       | 973   | 16037.93  |

146 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imput |              | Imputatio | 5     |                |            |           |
|----------------|--------------|-----------|-------|----------------|------------|-----------|
| Linear regress | sion         |           |       | Number of      | obs =      | 81        |
|                |              |           |       | Average R      | RVI =      | 0.0486    |
|                |              |           |       | Largest FMI    |            | 0.3682    |
|                |              |           |       | Complete       | DF =       | 68        |
| DF adjustment: | : Small samp | le        |       | DF: n          | nin =      | 20.23     |
|                |              |           | ā     | avg =          | 60.13      |           |
|                |              |           |       | nax =          | 65.98      |           |
| Model F test:  | Equal F      |           |       | F( <b>11</b> , | 65.5) =    | 5.72      |
| Within VCE typ | pe: O        | LS        |       | Prob > F       | =          | 0.0000    |
|                |              |           |       |                |            |           |
| Right_Hipp~s   | Coefficient  | Std. err. | t     | P> t           | [95% conf. | interval] |
| LnNFLw1        | 8.182885     | 78.8537   | 0.10  | 0.918          | -149.4793  | 165.8451  |
| Sex            | -101.4924    | 105.2277  | -0.96 | 0.339          | -312.2976  | 109.3127  |
| w1Age          | -9.13994     | 4.927262  | -1.85 | 0.068          | -18.9776   | .6977176  |
| Race           | 0            | (omitted) |       |                |            |           |
| PovStat        | -177.1107    | 76.13927  | -2.33 | 0.023          | -329.1453  | -25.07603 |
| TIME_V1SCAN    | .0385517     | .0597153  | 0.65  | 0.521          | 0807878    | .1578913  |
| w1BMI          | -6.41124     | 5.963263  | -1.08 | 0.286          | -18.31937  | 5.496892  |
| w1Creatinine   | 109.063      | 183.6912  | 0.59  | 0.559          | -273.8351  | 491.9611  |
| w1USpecGrav    | 859.4353     | 4717.46   | 0.18  | 0.856          | -8562.225  | 10281.1   |
| w1BUN          | 10.53328     | 10.32827  | 1.02  | 0.312          | -10.11009  | 31.17664  |
| w1ALP          | 129901       | 1.585806  | -0.08 | 0.935          | -3.297873  | 3.038071  |
| w1UricAcid     | .2931425     | 26.49148  | 0.01  | 0.991          | -52.62536  | 53.21165  |
| ICV_volM2      | .0019653     | .0003418  | 5.75  | 0.000          | .0012825   | .0026481  |
| _cons          | 953.5341     | 4839.808  | 0.20  | 0.844          | -8711.622  | 10618.69  |

148 . //ANALYSIS C//

149 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w

| Multiple-imputation estimates  | Imputations          | = | 5      |
|--------------------------------|----------------------|---|--------|
| Linear regression              | Number of obs        | = | 80     |
| _                              | Average RVI          | = | 0.0104 |
|                                | Largest FMI          | = | 0.0460 |
|                                | Complete DF          | = | 67     |
| DF adjustment: Small sample    | DF: min              | = | 60.53  |
|                                | avg                  | = | 64.20  |
|                                | max                  | = | 64.86  |
| Model F test: <b>Equal FMI</b> | F( <b>11</b> , 65.0) | = | 1.94   |
| Within VCE type: OLS           | Prob > F             | = | 0.0497 |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 1.945894    | .8518017  | 2.28  | 0.026 | .2444199   | 3.647368  |
| Sex          | .6223561    | 1.162435  | 0.54  | 0.594 | -1.699349  | 2.944061  |
| w1Age        | .0158934    | .0544158  | 0.29  | 0.771 | 0927942    | .124581   |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 2109993     | .8382868  | -0.25 | 0.802 | -1.885432  | 1.463433  |
| TIME_V1SCAN  | 0007231     | .0006507  | -1.11 | 0.271 | 002023     | .0005769  |
| w1BMI        | .0807652    | .066555   | 1.21  | 0.229 | 0522004    | .2137309  |
| w1Creatinine | 1.451221    | 1.693415  | 0.86  | 0.395 | -1.935503  | 4.837944  |
| w1USpecGrav  | -67.18945   | 52.01917  | -1.29 | 0.201 | -171.0886  | 36.70974  |
| w1BUN        | .0669353    | .1126784  | 0.59  | 0.555 | 1581084    | .2919791  |
| w1ALP        | 0123329     | .0173775  | -0.71 | 0.480 | 0470411    | .0223753  |
| w1UricAcid   | 34772       | .3069622  | -1.13 | 0.261 | 9608229    | .265383   |
| ICV volM2    | 4.23e-06    | 3.78e-06  | 1.12  | 0.267 | -3.32e-06  | .0000118  |
| _cons        | 63.94173    | 53.38336  | 1.20  | 0.235 | -42.68159  | 170.5651  |

150 .

151 . save, replace

file **finaldata\_imputed.dta** saved

152 . 153 .

154 .

155 . //WHITES//

157 . use finaldata\_imputed,clear

158 .

159 .

160 .

161 . //ANALYSIS B//

162 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imputation estimates  | Imputations                   | = | 5      |
|--------------------------------|-------------------------------|---|--------|
| Linear regression              | Number of obs                 | = | 119    |
|                                | Average RVI                   | = | 0.0150 |
|                                | Largest FMI                   | = | 0.0851 |
|                                | Complete DF                   | = | 106    |
| DF adjustment: Small sample    | DF: min                       | = | 82.85  |
|                                | avg                           | = | 98.17  |
|                                | max                           | = | 103.94 |
| Model F test: <b>Equal FMI</b> | F( <b>11</b> , <b>103.9</b> ) | = | 7.23   |
| Within VCE type: OLS           | Prob > F                      | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | -86.70614   | 72.08784  | -1.20 | 0.232 | -229.6609  | 56.24864  |
| Sex          | -77.64143   | 97.70553  | -0.79 | 0.429 | -271.4146  | 116.1318  |
| w1Age        | -1.429075   | 4.030629  | -0.35 | 0.724 | -9.422082  | 6.563933  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -20.22454   | 67.09589  | -0.30 | 0.764 | -153.2791  | 112.8301  |
| TIME V1SCAN  | .0288083    | .0470945  | 0.61  | 0.542 | 064588     | .1222045  |
| w1BMI        | 1.981964    | 4.642089  | 0.43  | 0.670 | -7.223632  | 11.18756  |
| w1Creatinine | -150.8853   | 183.5265  | -0.82 | 0.413 | -515.8515  | 214.081   |
| w1USpecGrav  | -2630.231   | 5479.88   | -0.48 | 0.633 | -13529.78  | 8269.321  |
| w1BUN        | 18.17372    | 8.457579  | 2.15  | 0.034 | 1.380021   | 34.96742  |
| w1ALP        | -1.902394   | 1.405299  | -1.35 | 0.179 | -4.689275  | .8844873  |
| w1UricAcid   | 2.878224    | 25.99766  | 0.11  | 0.912 | -48.67977  | 54.43622  |
| ICV volM2    | .0019679    | .0002984  | 6.59  | 0.000 | .0013761   | .0025597  |
| cons         | 3866.032    | 5505.953  | 0.70  | 0.485 | -7084.767  | 14816.83  |

163 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imput | tation estimat | es        |       | Imputat        | ions    | =    | 5         |
|----------------|----------------|-----------|-------|----------------|---------|------|-----------|
| Linear regress | sion           |           |       | Number         | of obs  | =    | 119       |
|                |                |           |       | Average        | RVI     | =    | 0.0237    |
|                |                |           |       | Largest        | : FMI   | =    | 0.1847    |
|                |                |           |       | Complet        | e DF    | =    | 106       |
| DF adjustment: | : Small samp   | ole       |       | DF:            | min     | =    | 53.15     |
|                |                |           |       |                | avg     | =    | 93.68     |
|                |                |           |       |                | max     | =    | 103.99    |
| Model F test:  | Equal F        | MI        |       | F( <b>11</b> , | 103.7)  | =    | 9.35      |
| Within VCE typ | oe: (          | DLS       |       | Prob >         | F       | =    | 0.0000    |
|                |                |           |       |                |         |      |           |
| Right_Hipp~s   | Coefficient    | Std. err. | t     | P> t           | [95% c  | onf. | interval] |
| LnNFLw1        | -97.7223       | 73.65409  | -1.33 | 0.187          | -243.78 | 51   | 48.34052  |
| Sex            | -198.4996      | 100.2745  | -1.98 | 0.050          | -397.40 | 63   | .4071463  |
| w1Age          | 1.359518       | 4.117741  | 0.33  | 0.742          | -6.8063 | 29   | 9.525365  |
| Race           | 0              | (omitted) |       |                |         |      |           |
| PovStat        | 8.402196       | 68.50156  | 0.12  | 0.903          | -127.43 | 92   | 144.2436  |
| TIME_V1SCAN    | .0608585       | .0482039  | 1.26  | 0.210          | 03474   | 51   | .1564621  |
| w1BMI          | 6.264825       | 4.742747  | 1.32  | 0.189          | -3.1405 | 08   | 15.67016  |
| w1Creatinine   | -58.06901      | 197.6391  | -0.29 | 0.770          | -454.45 | 68   | 338.3188  |
| w1USpecGrav    | -1632.916      | 5675.091  | -0.29 | 0.774          | -12941. | 38   | 9675.546  |
| w1BUN          | 18.30104       | 8.73048   | 2.10  | 0.039          | .9481   | 63   | 35.65392  |
| w1ALP          | 5665504        | 1.435241  | -0.39 | 0.694          | -3.4128 | 22   | 2.279721  |
| w1UricAcid     | -5.225787      | 26.49618  | -0.20 | 0.844          | -57.769 | 52   | 47.31794  |
| ICV_volM2      | .0025455       | .000305   | 8.35  | 0.000          | .00194  | 07   | .0031504  |
|                | 2042 200       |           |       |                |         |      | 40400 00  |

0.36

0.719

-9306.732

13433.39

164 .

165 . //ANALYSIS C//

\_cons

2063.329

5705.856

166 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w

| Multiple-imput | tation estimat | es        |       | Imputati       | .ons     | =     | 5         |
|----------------|----------------|-----------|-------|----------------|----------|-------|-----------|
| Linear regress | sion           |           |       | Number of obs  |          |       | 117       |
|                |                |           |       | Average        | RVI      | =     | 0.0041    |
|                |                |           |       | Largest        | FMI      | =     | 0.0399    |
|                |                |           |       | Complete       | DF       | =     | 104       |
| DF adjustment  | : Small samp   | le        |       | DF:            | min      | =     | 94.78     |
| J              | •              |           |       |                | avg      | =     | 101.12    |
|                |                |           |       |                | max      | =     | 102.02    |
| Model F test:  | Equal F        | MI        |       | F( <b>11</b> , | 102.0    | ) =   | 1.54      |
| Within VCE typ | •              | LS        |       | Prob > F       |          | ´ =   | 0.1276    |
|                |                |           |       |                | F = = 0/ |       |           |
| LnLesion_V~e   | Coefficient    | Std. err. | t     | P> t           | [95%     | conf. | interval] |
| LnNFLw1        | 2.612549       | .9554125  | 2.73  | 0.007          | .7174    | 1982  | 4.5076    |
| Sex            | 7090678        | 1.289333  | -0.55 | 0.584          | -3.266   | 5498  | 1.848363  |
| w1Age          | 0211332        | .0544322  | -0.39 | 0.699          | 1296     | 997   | .0868334  |
| Race           | 0              | (omitted) |       |                |          |       |           |
| PovStat        | 1.652573       | .8834686  | 1.87  | 0.064          | 0998     | 3087  | 3.404956  |
| TIME V1SCAN    | 0005013        | .0006109  | -0.82 | 0.414          | 0017     | 7131  | .0007105  |
| -<br>w1BMI     | 0045885        | .0612019  | -0.07 | 0.940          | 1259     | 9823  | .1168053  |
| w1Creatinine   | 4184743        | 2.394282  | -0.17 | 0.862          | -5.17    |       | 4.334917  |
| w1USpecGrav    | 106.098        | 69.34003  | 1.53  | 0.129          | -31.4    |       | 243.6535  |
| w1BUN          | 0056389        | .1101158  | -0.05 | 0.959          | 2246     |       | .2128052  |
|                |                |           |       |                |          |       |           |

 -.0034908
 .0182752
 -0.19
 0.849
 -.0397396

 .3219479
 .3437528
 0.94
 0.351
 -.3598914

 2.26e-06
 3.88e-06
 0.58
 0.561
 -5.43e-06

-1.60 0.113

167 .

168 . save, replace

file finaldata\_imputed.dta saved

-111.2082 69.64013

169 .

170 . \*\*INTERACTION by Race\*\*

w1ALP

\_cons

w1UricAcid

ICV\_volM2

171 .

172 .

173 . //ANALYSIS B//

174 . mi estimate: reg Left\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGra

-249.3603

.032758

1.003787

9.96e-06

26.94385

| Multiple-imputation estimates Imputations |                               |   | 5      |
|---|-------------------------------|---|--------|
| Linear regression                         | Number of obs                 | = | 200    |
|   | Average RVI                   | = | 0.0329 |
|   | Largest FMI                   | = | 0.3254 |
|   | Complete DF                   | = | 185    |
| DF adjustment: Small sample               | DF: min                       | = | 34.00  |
|   | avg                           | = | 165.64 |
|   | max                           | = | 182.98 |
| Model F test: <b>Equal FMI</b>            | F( <b>13</b> , <b>182.0</b> ) | = | 11.39  |
| Within VCE type: OLS                      | Prob > F                      | = | 0.0000 |

| Left_Hippoca~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|----------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1        | -59.2947    | 63.13528  | -0.94 | 0.349 | -183.8712  | 65.28177  |
| Race<br>AfrAm  | -147.988    | 177.152   | -0.84 | 0.405 | -497.6294  | 201.6534  |
| Race#c.LnNFLw1 |             |           |       |       |            |           |
| AfrAm          | 51.31331    | 86.44225  | 0.59  | 0.554 | -119.2717  | 221.8983  |
| Sex            | -49.02419   | 71.17781  | -0.69 | 0.492 | -189.5746  | 91.52624  |
| w1Age          | -5.038841   | 2.953859  | -1.71 | 0.090 | -10.86705  | .7893666  |
| Race           | 0           | (omitted) |       |       |            |           |
| PovStat        | -78.72942   | 49.31025  | -1.60 | 0.112 | -176.0203  | 18.56149  |
| TIME_V1SCAN    | .0028481    | .0358701  | 0.08  | 0.937 | 0679255    | .0736218  |
| w1BMI          | .1911151    | 3.572507  | 0.05  | 0.957 | -6.857511  | 7.239741  |
| w1Creatinine   | -7.395116   | 133.8305  | -0.06 | 0.956 | -279.3711  | 264.5809  |
| w1USpecGrav    | -2163.499   | 3614.241  | -0.60 | 0.550 | -9300.565  | 4973.566  |
| w1BUN          | 10.16165    | 6.389524  | 1.59  | 0.114 | -2.460798  | 22.78411  |
| w1ALP          | 6922936     | 1.037262  | -0.67 | 0.505 | -2.738861  | 1.354273  |
| w1UricAcid     | -5.055964   | 18.50976  | -0.27 | 0.785 | -41.57756  | 31.46563  |
| ICV_volM2      | .0017741    | .0002193  | 8.09  | 0.000 | .0013414   | .0022068  |
| _cons          | 3853.616    | 3663.7    | 1.05  | 0.294 | -3381.296  | 11088.53  |

175 . mi estimate: reg Right\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGr

| Multiple-imputat  |              |           | Imputations |          |        | 5     |           |
|-------------------|--------------|-----------|-------------|----------|--------|-------|-----------|
| Linear regression | on           |           |             | Number o | of obs | =     | 200       |
| _                 |              |           |             | Average  | RVI    | =     | 0.0144    |
|                   |              |           |             | Largest  | FMI    | =     | 0.1492    |
|                   |              |           |             | Complete | DF     | =     | 185       |
| DF adjustment:    | Small sample |           |             | DF:      | min    | =     | 89.15     |
|                   |              |           |             |          | avg    | =     | 173.21    |
|                   |              |           |             |          | max    | =     | 183.00    |
| Model F test:     | Equal FMI    |           |             | F( 13,   | 182.8) | =     | 14.40     |
| Within VCE type:  | OLS          |           |             | Prob > F | :      | =     | 0.0000    |
| Right_Hippoc~s    | Coefficient  | Std. err. | t           | P> t     | [95%   | conf. | interval] |
| LnNFLw1           | -61.59938    | 63.41271  | -0.97       | 0.333    | -186.  | 7163  | 63.51758  |
| Race              |              |           |             |          |        |       |           |
| AfrAm             | -164.3199    | 176.9449  | -0.93       | 0.354    | -513.  | 4586  | 184.8187  |
| Race#c.LnNFLw1    |              |           |             |          |        |       |           |
| AfrAm             | 58.97453     | 86.5525   | 0.68        | 0.497    | -111.  | 8016  | 229.7507  |
| Sex               | -125.5599    | 70.77754  | -1.77       | 0.078    | -265.  | 2334  | 14.11366  |
| w1Age             | -3.237314    | 2.970235  | -1.09       | 0.277    | -9.09  | 7678  | 2.62305   |
| Race              | 0            | (omitted) |             |          |        |       |           |
| PovStat           | -61.79067    | 49.6382   | -1.24       | 0.215    | -159   | .728  | 36.14663  |
| TIME_V1SCAN       | .0300347     | .0361242  | 0.83        | 0.407    | 041    | 2401  | .1013096  |
| w1BMI             | 1.140001     | 3.598246  | 0.32        | 0.752    | -5.95  | 9419  | 8.23942   |
| w1Creatinine      | 25.13627     | 122.0372  | 0.21        | 0.837    | -217.  | 3434  | 267.6159  |
| w1USpecGrav       | 309.5174     | 3630.122  | 0.09        | 0.932    | -6857  | .726  | 7476.761  |
| w1BUN             | 12.14221     | 6.326284  | 1.92        | 0.057    | 34     | 3046  | 24.62747  |
| w1ALP             | 1016612      | 1.044363  | -0.10       | 0.923    | -2.16  | 2231  | 1.958909  |
| w1UricAcid        | -8.550749    | 18.61339  | -0.46       | 0.647    | -45.2  | 7582  | 28.17432  |
| ICV_volM2         | .002164      | .0002209  | 9.80        | 0.000    | .001   | 7283  | .0025998  |
| _cons             | 949.8222     | 3678.634  | 0.26        | 0.797    | -6313  | . 234 | 8212.878  |

177 . //ANALYSIS C//

Linear regression

Multiple-imputation estimates

DF adjustment: Small sample

Multiple-imputation estimates

Small sample

0LS

Linear regression

DF adjustment:

Within VCE type:

178 . mi estimate: reg LnLesion\_Volume c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav

Imputations
Number of obs

Average RVI

Largest FMI

Complete DF

min

DF:

5

197

182

200

186

36.74 166.80

183.97

=

0.0333

0.3094

0.0011

0.0123

176.76

=

| nLesion_Vol~e  | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval |  |
|----------------|-------------|-----------|-------|-------|------------|----------|--|
| LnNFLw1        | 2.090425    | .7852294  | 2.66  | 0.008 | .5409864   | 3.639863 |  |
| Race           |             |           |       |       |            |          |  |
| AfrAm          | 1.318659    | 2.157118  | 0.61  | 0.542 | -2.93784   | 5.575157 |  |
| Race#c.LnNFLw1 |             |           |       |       |            |          |  |
| AfrAm          | 0412461     | 1.057892  | -0.04 | 0.969 | -2.128713  | 2.046221 |  |
| Sex            | .1738554    | .8784532  | 0.20  | 0.843 | -1.559549  | 1.907259 |  |
| w1Age          | .0047742    | .0372467  | 0.13  | 0.898 | 0687223    | .0782707 |  |
| Race           | 0           | (omitted) |       |       |            |          |  |
| PovStat        | .8154874    | .6073149  | 1.34  | 0.181 | 3828848    | 2.01386  |  |
| TIME V1SCAN    | 0005118     | .0004372  | -1.17 | 0.243 | 0013746    | .000351  |  |
| w1BMI          | .0350196    | .0443423  | 0.79  | 0.431 | 052478     | .1225171 |  |
| w1Creatinine   | .2592385    | 1.398472  | 0.19  | 0.853 | -2.500612  | 3.019089 |  |
| w1USpecGrav    | 25.8844     | 43.6679   | 0.59  | 0.554 | -60.28369  | 112.0525 |  |
| w1BUN          | .0458527    | .07789    | 0.59  | 0.557 | 1078434    | .1995487 |  |
| w1ALP          | 0041223     | .0126875  | -0.32 | 0.746 | 0291576    | .0209131 |  |
| w1UricAcid     | .0554629    | .2353708  | 0.24  | 0.814 | 4089782    | .5199041 |  |
| ICV volM2      | 2.18e-06    | 2.70e-06  | 0.81  | 0.422 | -3.16e-06  | 7.51e-06 |  |
| _cons          | -30.70183   | 44.17127  | -0.70 | 0.488 | -117.8633  | 56.45962 |  |

184 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

Imputations Number of obs

Average RVI

Largest FMI

Complete DF

F( 12,

Prob > F

min

avg

max

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | -37.25832   | 50.88558  | -0.73 | 0.465 | -137.6533  | 63.1367   |
| Sex          | -43.57278   | 70.24163  | -0.62 | 0.536 | -182.245   | 95.09944  |
| w1Age        | -5.060419   | 2.949241  | -1.72 | 0.088 | -10.87934  | .7584995  |
| Race         | -47.71295   | 51.06917  | -0.93 | 0.351 | -148.4815  | 53.05563  |
| PovStat      | -79.51262   | 49.20706  | -1.62 | 0.108 | -176.5964  | 17.57113  |
| TIME_V1SCAN  | .0020168    | .0357846  | 0.06  | 0.955 | 0685856    | .0726193  |
| w1BMI        | .0910275    | 3.562295  | 0.03  | 0.980 | -6.937188  | 7.119243  |
| w1Creatinine | -19.32324   | 130.2101  | -0.15 | 0.883 | -283.2165  | 244.57    |
| w1USpecGrav  | -2302.201   | 3598.888  | -0.64 | 0.523 | -9408.514  | 4804.112  |
| w1BUN        | 10.13172    | 6.37474   | 1.59  | 0.114 | -2.460543  | 22.72398  |
| w1ALP        | 6707219     | 1.034622  | -0.65 | 0.518 | -2.712003  | 1.370559  |
| w1UricAcid   | -4.39417    | 18.4413   | -0.24 | 0.812 | -40.77925  | 31.99091  |
| ICV_volM2    | .0017535    | .0002162  | 8.11  | 0.000 | .0013269   | .00218    |
| _cons        | 4028.771    | 3647.103  | 1.10  | 0.271 | -3172.847  | 11230.39  |

185 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imputation estimates Linear regression | Imputations<br>Number of obs | = | 5<br>200 |
|---|------------------------------|---|----------|
| •   | Average RVI                  | = | 0.0144   |
|   | Largest FMI                  | = | 0.1379   |
|   | Complete DF                  | = | 186      |
|   | DF: min                      | = | 95.90    |
|   | avg                          | = | 174.17   |
| DF adjustment: Small sample                     | max                          | = | 183.99   |
|   | <u>F( 12, .)</u>             | = |          |
| Within VCE type: OLS                            | Prob > F                     | = | •        |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | -36.25761   | 51.24757  | -0.71 | 0.480 | -137.3664  | 64.8512   |
| Sex          | -119.2986   | 69.98962  | -1.70 | 0.090 | -257.4069  | 18.80963  |
| w1Age        | -3.263323   | 2.965383  | -1.10 | 0.273 | -9.113898  | 2.587253  |
| Race         | -49.09547   | 51.25277  | -0.96 | 0.339 | -150.2175  | 52.02658  |
| PovStat      | -62.7007    | 49.54821  | -1.27 | 0.207 | -160.4569  | 35.05548  |
| TIME V1SCAN  | .029086     | .0360391  | 0.81  | 0.421 | 0420182    | .1001902  |
| w1BMI        | 1.027243    | 3.588663  | 0.29  | 0.775 | -6.052998  | 8.107483  |
| w1Creatinine | 11.48583    | 119.2375  | 0.10  | 0.923 | -225.2017  | 248.1734  |
| w1USpecGrav  | 149.8604    | 3617.669  | 0.04  | 0.967 | -6992.603  | 7292.324  |
| w1BUN        | 12.10546    | 6.314764  | 1.92  | 0.057 | 3564548    | 24.56737  |
| w1ALP        | 0762213     | 1.041921  | -0.07 | 0.942 | -2.131892  | 1.979449  |
| w1UricAcid   | -7.78575    | 18.55129  | -0.42 | 0.675 | -44.38693  | 28.81543  |
| ICV_volM2    | .0021403    | .0002178  | 9.83  | 0.000 | .0017106   | .0025699  |
| _cons        | 1145.604    | 3665.283  | 0.31  | 0.755 | -6090.861  | 8382.068  |

186 . 187 . //ANALYSIS C//

188 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w

| Multiple-imputation estimates | Imputations   | = | 5      |
|-------------------------------|---------------|---|--------|
| Linear regression             | Number of obs | = | 197    |
|                               | Average RVI   | = | 0.0012 |
|                               | Largest FMI   | = | 0.0122 |
|                               | Complete DF   | = | 183    |
|                               | DF: min       | = | 177.77 |
|                               | avg           | = | 180.68 |
| DF adjustment: Small sample   | max           | = | 181.02 |
|                               | F( 12, .)     | = | •      |
| Within VCE type: OLS          | Prob > F      | = | •      |
|                               |               |   |        |
|                               |               |   |        |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 2.072196    | .62909    | 3.29  | 0.001 | .8309037   | 3.313489  |
| Sex          | .1699732    | .8703758  | 0.20  | 0.845 | -1.547427  | 1.887373  |
| w1Age        | .0048196    | .0371251  | 0.13  | 0.897 | 0684342    | .0780735  |
| Race         | 1.238204    | .6245621  | 1.98  | 0.049 | .0058438   | 2.470564  |
| PovStat      | .815802     | .6055982  | 1.35  | 0.180 | 3791381    | 2.010742  |
| TIME_V1SCAN  | 0005111     | .0004357  | -1.17 | 0.242 | 0013707    | .0003486  |
| w1BMI        | .0351251    | .0441332  | 0.80  | 0.427 | 0519567    | .1222069  |
| w1Creatinine | .2674628    | 1.377196  | 0.19  | 0.846 | -2.450293  | 2.985219  |
| w1USpecGrav  | 26.0112     | 43.42633  | 0.60  | 0.550 | -59.67694  | 111.6993  |
| w1BUN        | .0457958    | .0776599  | 0.59  | 0.556 | 1074404    | .1990321  |
| w1ALP        | 0041418     | .0126438  | -0.33 | 0.744 | 02909      | .0208065  |
| w1UricAcid   | .0548518    | .2341912  | 0.23  | 0.815 | 4072445    | .5169482  |
| ICV_volM2    | 2.19e-06    | 2.67e-06  | 0.82  | 0.411 | -3.06e-06  | 7.45e-06  |
| _cons        | -32.05637   | 43.9169   | -0.73 | 0.466 | -118.7125  | 54.59981  |

190 . save, replace

file finaldata\_imputed.dta saved

```
192 . ********MODEL 5: MODEL2+OXIDATIVE STRESS*****
```

193 .

194 . 195 . //AFRICAN-AMERICAN//

197 . use finaldata\_imputed,clear

198 .

199 .

200 . //ANALYSIS B//

201 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imputation estimates      | Imputations                  | = | 5      |
|------------------------------------|------------------------------|---|--------|
| Linear regression                  | Number of obs                | = | 81     |
|                                    | Average RVI                  | = | 0.0849 |
|                                    | Largest FMI                  | = | 0.5101 |
|                                    | Complete DF                  | = | 70     |
| DF adjustment: <b>Small sample</b> | DF: min                      | = | 12.74  |
|                                    | avg                          | = | 61.89  |
|                                    | max                          | = | 67.89  |
| Model F test: <b>Equal FMI</b>     | F( <b>10</b> , <b>66.8</b> ) | = | 5.59   |
| Within VCE type: OLS               | Prob > F                     | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 26.96436    | 79.13403  | 0.34  | 0.734 | -130.9947  | 184.9235  |
| Sex          | -48.11094   | 85.2136   | -0.56 | 0.574 | -218.1616  | 121.9397  |
| w1Age        | -9.076089   | 4.603364  | -1.97 | 0.053 | -18.26509  | .1129099  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -193.7874   | 77.97428  | -2.49 | 0.015 | -349.4269  | -38.14789 |
| TIME V1SCAN  | .0202175    | .0628262  | 0.32  | 0.749 | 1053355    | .1457704  |
| w1BMI        | .7466461    | 5.89283   | 0.13  | 0.900 | -11.01458  | 12.50788  |
| w1TotalD     | 5737482     | 6.452568  | -0.09 | 0.931 | -14.54254  | 13.39505  |
| w1Albumin    | 178.3093    | 119.2281  | 1.50  | 0.139 | -59.61612  | 416.2347  |
| w1EosinPct   | 1228362     | 18.34327  | -0.01 | 0.995 | -36.72734  | 36.48166  |
| ICV_volM2    | .0017414    | .0003417  | 5.10  | 0.000 | .0010593   | .0024236  |
| _cons        | 1043.56     | 710.9811  | 1.47  | 0.147 | -375.276   | 2462.396  |

202 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imput | tation estimat | es        |       | Imputat | ions   | =     | 5         |
|----------------|----------------|-----------|-------|---------|--------|-------|-----------|
| Linear regress | sion           |           |       | Number  | of obs | =     | 81        |
|                |                |           |       | Average | RVI    | =     | 0.0738    |
|                |                |           |       | Largest | FMI    | =     | 0.4659    |
|                |                |           |       | Complet | e DF   | =     | 70        |
| DF adjustment: | : Small samp   | ole       |       | DF:     | min    | =     | 14.70     |
|                |                |           |       |         | avg    | =     | 61.75     |
|                |                |           |       |         | max    | =     | 67.85     |
| Model F test:  | Equal F        | MI        |       | F( 10,  | 67.0   | ) =   | 6.49      |
| Within VCE typ | oe: C          | LS        |       | Prob >  | F      | =     | 0.0000    |
|                |                |           |       |         |        |       |           |
| Right_Hipp~s   | Coefficient    | Std. err. | t     | P> t    | [95%   | conf. | interval] |
| LnNFLw1        | 7.870859       | 74.8549   | 0.11  | 0.917   | -141.5 | 5278  | 157.2695  |
| Sex            | -63.38945      | 81.01418  | -0.78 | 0.437   | -225.6 | 789   | 98.30004  |
| w1Age          | -6.478337      | 4.389327  | -1.48 | 0.145   | -15.24 | 1318  | 2.286511  |
| Race           | 0              | (omitted) |       |         |        |       |           |
| PovStat        | -175.4752      | 73.80169  | -2.38 | 0.020   | -322.7 | 7722  | -28.17827 |
| TIME_V1SCAN    | .0281615       | .0596123  | 0.47  | 0.638   | 096    | 977   | .1472999  |
| w1BMI          | -2.977363      | 5.611696  | -0.53 | 0.597   | -14.18 | 3014  | 8.225411  |
| w1TotalD       | -3.34465       | 5.903467  | -0.57 | 0.580   | -15.94 | 1984  | 9.260545  |
| w1Albumin      | 170.0126       | 113.4833  | 1.50  | 0.139   | -56.48 | 3806  | 396.5133  |
| w1EosinPct     | 1.558466       | 17.39851  | 0.09  | 0.929   | -33.16 | 5114  | 36.27807  |
| ICV_volM2      | .0018706       | .0003244  | 5.77  | 0.000   | .0012  | 2229  | .0025182  |
| _cons          | 1227.868       | 676.0348  | 1.82  | 0.074   | -121.4 | 1017  | 2577.138  |

203

204 . //ANALYSIS C//

205 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct I

| Imputations                  | =  | 5  |
|------------------------------|--|--|
| Number of obs                | =  | 80   |
| Average RVI                  | =  | 0.0141   |
| Largest FMI                  | =  | 0.1269   |
| Complete DF                  | =  | 69   |
| DF: min                      | =  | 49.19  |
| avg                          | =  | 65.27  |
| max                          | =  | 67.04  |
| F( <b>10</b> , <b>67.0</b> ) | =  | 1.80   |
| Prob > F                     | =  | 0.0779   |
|                              | Number of obs Average RVI Largest FMI Complete DF DF: min avg max F( 10, 67.0) | Number of obs = Average RVI = Largest FMI = Complete DF = DF: min = avg = max = F( 10, 67.0) = |

| LnLesion_V~e | Coefficient | Std. err. | t               | P> t            | [95% conf. | interval] |
|--------------|-------------|-----------|-----------------|-----------------|------------|-----------|
| LnNFLw1      | 2.050945    | .8410706  | 2.44            | 0.017           | .3721324   | 3.729757  |
| Sex          | .7676167    | .926282   | 0.83            | 0.410           | -1.081268  | 2.616501  |
| w1Age        | 0043154     | .049404   | -0.09           | 0.931           | 102937     | .0943062  |
| Race         | 0           | (omitted) |                 |                 |            |           |
| PovStat      | 3952118     | .8294862  | -0.48           | 0.635           | -2.050906  | 1.260483  |
| TIME_V1SCAN  | 0004985     | .00066    | -0.76           | 76 0.4530018161 |            | .0008191  |
| w1BMI        | .0736815    | .0627682  | 1.17            | 17 0.245        | 0516063    | .1989694  |
| w1TotalD     | .0173761    | .0544181  | 0.32            | 0.751           | 0919703    | .1267225  |
| w1Albumin    | 6458137     | 1.295888  | -0.50           | 0.620           | -3.232416  | 1.940788  |
| w1EosinPct   | .0734438    | .1977952  | 0.37            | 0.712           | 3213529    | .4682405  |
| ICV_volM2    | 3.65e-06    | 3.63e-06  | 1.00 0.319 -3.6 | -3.61e-06       | .0000109   |           |
| _cons        | -1.641701   | 7.714438  | -0.21           | 0.832           | -17.03966  | 13.75626  |
|              | I           |           |                 |                 |            |           |

207 . save, replace

file finaldata\_imputed.dta saved

208 .

209 .

210 .

211 . //WHITE//

212 .

213 . use finaldata\_imputed,clear

214 . 215 .

216 .

217 . //ANALYSIS B//

218 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imputation estimates Linear regression | Imputations<br>Number of obs | = | 5<br>119 |
|---|------------------------------|---|----------|
|   | Average RVI                  | = | 0.0101   |
|   | Largest FMI                  | = | 0.0683   |
|   | Complete DF                  | = | 108      |
| DF adjustment: <b>Small sample</b>              | DF: min                      | = | 89.78    |
|   | avg                          | = | 103.98   |
|   | max                          | = | 106.03   |
| Model F test: <b>Equal FMI</b>                  | F( <b>10, 106.0</b> )        | = | 7.18     |
| Within VCE type: OLS                            | Prob > F                     | = | 0.0000   |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | -45.03035   | 73.57068  | -0.61 | 0.542 | -190.8984  | 100.8376  |
| Sex          | -78.56227   | 84.45239  | -0.93 | 0.354 | -245.9978  | 88.87326  |
| w1Age        | -1.96392    | 3.989902  | -0.49 | 0.624 | -9.874265  | 5.946425  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -21.0366    | 68.03172  | -0.31 | 0.758 | -155.9161  | 113.8429  |
| TIME_V1SCAN  | .0286813    | .0475592  | 0.60  | 0.548 | 0656099    | .1229726  |
| w1BMI        | 3.978376    | 4.629027  | 0.86  | 0.392 | -5.199329  | 13.15608  |
| w1TotalD     | .9692221    | 3.147587  | 0.31  | 0.759 | -5.28422   | 7.222664  |
| w1Albumin    | 115.3072    | 125.4574  | 0.92  | 0.360 | -133.4291  | 364.0435  |
| w1EosinPct   | .8073337    | 14.82676  | 0.05  | 0.957 | -28.60562  | 30.22029  |
| ICV volM2    | .0018605    | .0002904  | 6.41  | 0.000 | .0012848   | .0024362  |
| _cons        | 692.9637    | 775.1719  | 0.89  | 0.373 | -843.8863  | 2229.814  |

219 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imput | tation estimat | es        |       | Imputat        | ions   | =     | 5         |
|----------------|----------------|-----------|-------|----------------|--------|-------|-----------|
| Linear regress | sion           |           |       | Number         | of obs | =     | 119       |
|                |                |           |       | Average        | RVI    | =     | 0.0121    |
|                |                |           |       | Largest        |        | =     | 0.0787    |
|                |                |           |       | Complet        | e DF   | =     | 108       |
| DF adjustment: | : Small samp   | ole       |       | DF:            | min    | =     | 86.36     |
|                |                |           |       |                | avg    | =     | 103.35    |
|                |                |           |       |                | max    | =     | 106.05    |
| Model F test:  | Equal F        | MI        |       | F( <b>10</b> , | 106.0) | =     | 9.61      |
| Within VCE typ | oe: C          | LS        |       | Prob >         | F      | =     | 0.0000    |
|                |                |           |       |                |        |       |           |
| Right_Hipp~s   | Coefficient    | Std. err. | t     | P> t           | [95%   | conf. | interval] |
| LnNFLw1        | -41.76381      | 74.93336  | -0.56 | 0.578          | -190.3 | 322   | 106.8046  |
| Sex            | -189.5492      | 86.01555  | -2.20 | 0.030          | -360.0 | 825   | -19.01593 |
| w1Age          | .8736052       | 4.065979  | 0.21  | 0.830          | -7.187 | 612   | 8.934822  |
| Race           | 0              | (omitted) |       |                |        |       |           |
| PovStat        | 6.95772        | 69.31599  | 0.10  | 0.920          | -130.  | 468   | 144.3835  |
| TIME_V1SCAN    | .0597269       | .0484659  | 1.23  | 0.221          | 0363   | 625   | .1558164  |
| w1BMI          | 7.016551       | 4.717289  | 1.49  | 0.140          | -2.336 | 202   | 16.3693   |
| w1TotalD       | 2498373        | 3.223527  | -0.08 | 0.938          | -6.657 | 617   | 6.157943  |
| w1Albumin      | 73.08633       | 127.8702  | 0.57  | 0.569          | -180.  | 436   | 326.6087  |
| w1EosinPct     | 8.598594       | 15.20416  | 0.57  | 0.573          | -21.57 | 581   | 38.773    |
| ICV_volM2      | .002463        | .0002958  | 8.33  | 0.000          | .0018  | 765   | .0030495  |
| _cons          | 200.4744       | 789.78    | 0.25  | 0.800          | -1365. | 337   | 1766.286  |

221 . //ANALYSIS C//

222 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct I

| Multiple-imputation estimates  | Imputations           | = | 5      |
|--------------------------------|-----------------------|---|--------|
| Linear regression              | Number of obs         | = | 117    |
|                                | Average RVI           | = | 0.0064 |
|                                | Largest FMI           | = | 0.0499 |
|                                | Complete DF           | = | 106    |
| DF adjustment: Small sample    | DF: min               | = | 93.82  |
| -                              | avg                   | = | 102.93 |
|                                | max                   | = | 103.99 |
| Model F test: <b>Equal FMI</b> | F( <b>10, 104.0</b> ) | = | 1.70   |
| Within VCE type: OLS           | Prob > F              | = | 0.0902 |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 3.060656    | .9691368  | 3.16  | 0.002 | 1.138725   | 4.982587  |
| Sex          | 3556188     | 1.074022  | -0.33 | 0.741 | -2.485514  | 1.774276  |
| w1Age        | 0243922     | .0525264  | -0.46 | 0.643 | 1285542    | .0797698  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 1.634663    | .8750523  | 1.87  | 0.065 | 100608     | 3.369934  |
| TIME V1SCAN  | 0003841     | .0006057  | -0.63 | 0.527 | 0015853    | .0008172  |
| w1BMI        | .0657997    | .0598155  | 1.10  | 0.274 | 0528176    | .184417   |
| w1TotalD     | 0329273     | .0397436  | -0.83 | 0.409 | 1118412    | .0459866  |
| w1Albumin    | 2.78678     | 1.612601  | 1.73  | 0.087 | 4112068    | 5.984768  |
| w1EosinPct   | .0900246    | .1857617  | 0.48  | 0.629 | 2783482    | .4583974  |
| ICV_volM2    | 2.21e-06    | 3.68e-06  | 0.60  | 0.549 | -5.09e-06  | 9.51e-06  |
| _cons        | -17.07175   | 9.965539  | -1.71 | 0.090 | -36.83405  | 2.690545  |

224 . save, replace

file finaldata\_imputed.dta saved

Multiple-imputation estimates

225 .

227 . \*\*\*\*\*\*\*\*INTERACTION by Race\*\*\*\*\*\*\*\*\*

228 .

229 .

230 .

231 . //ANALYSIS B//

Linear regression

232 . mi estimate: reg Left\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1E

Number of obs

5

200

0.0240

0.2244

Imputations

Average RVI

Largest FMI

|                  |              |           |       | 8-5-     |        |       | ••        |  |
|------------------|--------------|-----------|-------|----------|--------|-------|-----------|--|
|                  |              |           |       | Complete | DF     | =     | 187       |  |
| DF adjustment:   | Small sample | <b>!</b>  |       | DF:      | min    | =     | 57.33     |  |
| •                | •            |           |       |          | avg    | =     | 173.96    |  |
|                  |              |           |       |          | max    | =     | 185.01    |  |
| Model F test:    | Equal FMI    |           |       | F( 12,   | 184.5) | =     | 12.55     |  |
| Within VCE type: | OLS          | ;         |       | Prob > F |        | =     | 0.0000    |  |
|                  |              |           |       |          |        |       |           |  |
| Left Hippoca~s   | Coefficient  | Std. err. | t     | P> t     | [95%   | conf. | interval] |  |
|                  |              |           |       |          |        |       |           |  |
| LnNFLw1          | -22.00302    | 62.7474   | -0.35 | 0.726    | -145.8 | 3021  | 101.7961  |  |
|                  |              |           |       |          |        |       |           |  |
| Race             |              |           |       |          |        |       |           |  |
| AfrAm            | -116.1883    | 171.968   | -0.68 | 0.500    | -455.4 | 1661  | 223.0894  |  |
|                  |              |           |       |          |        |       |           |  |
| Race#c.LnNFLw1   |              |           |       |          |        |       |           |  |
| AfrAm            | 26.825       | 84.09028  | 0.32  | 0.750    | -139.6 | 745   | 192.7245  |  |
| _                |              |           |       |          |        |       |           |  |
| Sex              | -59.00247    | 59.27981  | -1.00 | 0.321    | -175.9 | _     | 57.94919  |  |
| w1Age            | -4.728588    | 2.797887  | -1.69 | 0.093    | -10.24 | 1845  | .7912774  |  |
| Race             | 0            | (omitted) |       |          |        |       |           |  |
| PovStat          | -85.3275     | 49.13971  | -1.74 | 0.084    | -182.2 |       | 11.62211  |  |
| TIME_V1SCAN      | .0142363     | .036427   | 0.39  | 0.696    | 0576   |       | .0861074  |  |
| w1BMI            | 1.963872     | 3.491773  | 0.56  | 0.575    | -4.92  |       | 8.852889  |  |
| w1TotalD         | .0967476     | 2.741522  | 0.04  | 0.972    | -5.392 |       | 5.585856  |  |
| w1Albumin        | 147.8502     | 85.61859  | 1.73  | 0.086    | -21.0  |       | 316.7664  |  |
| w1EosinPct       | 1.033791     | 11.33438  | 0.09  | 0.927    | -21.33 |       | 23.40266  |  |
| ICV_volM2        | .001748      | .0002144  | 8.15  | 0.000    | .0013  |       | .0021709  |  |
| _cons            | 954.2679     | 534.2421  | 1.79  | 0.076    | -99.72 | 2767  | 2008.264  |  |
|                  |              |           |       |          |        |       |           |  |

233 . mi estimate: reg Right\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1

| Multiple-imputation estimates      | Imputations                   | = | 5      |
|------------------------------------|-------------------------------|---|--------|
| Linear regression                  | Number of obs                 | = | 200    |
|                                    | Average RVI                   | = | 0.0118 |
|                                    | Largest FMI                   | = | 0.0934 |
|                                    | Complete DF                   | = | 187    |
| DF adjustment: <b>Small sample</b> | DF: min                       | = | 126.52 |
|                                    | avg                           | = | 179.08 |
|                                    | max                           | = | 184.98 |
| Model F test: <b>Equal FMI</b>     | F( <b>12</b> , <b>184.9</b> ) | = | 15.40  |
| Within VCE type: OLS               | Prob > F                      | = | 0.0000 |

| Right_Hippoc~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|----------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1        | -8.227394   | 63.39585  | -0.13 | 0.897 | -133.3009  | 116.8461  |
| Race<br>AfrAm  | -137.8579   | 174.121   | -0.79 | 0.430 | -481.3834  | 205.6675  |
| Race#c.LnNFLw1 |             |           |       |       |            |           |
| AfrAm          | 25.7448     | 85.17084  | 0.30  | 0.763 | -142.2873  | 193.7769  |
| Sex            | -126.4024   | 60.01867  | -2.11 | 0.037 | -244.8116  | -7.993141 |
| w1Age          | -2.888947   | 2.834153  | -1.02 | 0.309 | -8.480396  | 2.702502  |
| Race           | 0           | (omitted) |       |       |            |           |
| PovStat        | -70.02834   | 49.70299  | -1.41 | 0.161 | -168.0875  | 28.03083  |
| TIME_V1SCAN    | .0350211    | .0368039  | 0.95  | 0.343 | 0375903    | .1076325  |
| w1BMI          | 2.417376    | 3.530984  | 0.68  | 0.494 | -4.548856  | 9.383608  |
| w1TotalD       | -1.963567   | 2.590745  | -0.76 | 0.450 | -7.090371  | 3.163238  |
| w1Albumin      | 113.874     | 86.62685  | 1.31  | 0.190 | -57.02956  | 284.7776  |
| w1EosinPct     | 6.391425    | 11.53654  | 0.55  | 0.580 | -16.38217  | 29.16502  |
| ICV_volM2      | .0021471    | .000217   | 9.89  | 0.000 | .0017189   | .0025753  |
| _cons          | 809.9582    | 540.7956  | 1.50  | 0.136 | -256.9629  | 1876.879  |

235 . //ANALYSIS C//

236 . mi estimate: reg LnLesion\_Volume c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1Eo

| Multiple-imputat   |              | 5         |       | Imputati       |       | =     | 5         |   |
|--------------------|--------------|-----------|-------|----------------|-------|-------|-----------|---|
| Linear regression  | on           |           |       | Number o       |       | =     | 197       |   |
|                    |              |           |       | Average        |       | =     | 0.0085    |   |
|                    |              |           |       | Largest        |       | =     | 0.0946    |   |
|                    |              |           |       | Complete       |       | =     | 184       |   |
| DF adjustment:     | Small sample | e         |       | DF:            | min   | =     | 124.05    |   |
|                    |              |           |       |                | avg   | =     | 177.35    |   |
|                    |              |           |       |                | max   | =     | 182.02    |   |
| Model F test:      | Equal FM     |           |       | F( <b>12</b> , | •     | =     | 2.08      |   |
| Within VCE type:   | : OLS        | 5         |       | Prob > F       |       | =     | 0.0204    |   |
| <br>LnLesion_Vol~e | Coefficient  | Std. err. | t     | P> t           | [95%  | conf. | interval] |   |
| LnNFLw1            | 2.356759     | .7857326  | 3.00  | 0.003          | .80   | 6382  | 3.907136  | ; |
| Race               |              |           |       |                |       |       |           |   |
| AfrAm              | 1.606879     | 2.104037  | 0.76  | 0.446          | -2.54 | 4571  | 5.758328  | , |
| Race#c.LnNFLw1     |              |           |       |                |       |       |           |   |
| AfrAm              | 2165997      | 1.03596   | -0.21 | 0.835          | -2.26 | 0644  | 1.827444  | Ļ |
| Sex                | .3021771     | .7269999  | 0.42  | 0.678          | -1.1  | 3226  | 1.736614  | ļ |
| w1Age              | .0068632     | .034861   | 0.20  | 0.844          | 061   | 9204  | .0756469  | ) |
| Race               | 0            | (omitted) |       |                |       |       |           |   |
| PovStat            | .76121       | .6033813  | 1.26  | 0.209          | 429   | 3181  | 1.951738  | Š |
| TIME_V1SCAN        | 0004485      | .0004425  | -1.01 | 0.312          | 001   | 3216  | .0004245  | ; |
| w1BMI              | .0638257     | .0428789  | 1.49  | 0.138          | 020   | 7786  | .1484301  | L |
| w1TotalD           | 0098155      | .031215   | -0.31 | 0.754          | 071   | 5986  | .0519675  | ; |
| w1Albumin          | 1.148852     | 1.057352  | 1.09  | 0.279          | 937   | 4057  | 3.235111  | L |
| w1EosinPct         | .1297388     | .1367343  | 0.95  | 0.344          | 140   | 0502  | .3995277  | , |
| ICV volM2          | 1.95e-06     | 2.61e-06  | 0.75  | 0.457          | -3.20 | e-06  | 7.10e-06  | ; |
| _cons              | -9.989937    | 6.574482  | -1.52 | 0.130          | -22.9 | 6194  | 2.982066  | • |
|                    |              |           |       |                |       |       |           |   |

```
Thursday March 30 18:52:37 2023 Page 28
237 .
238 . save, replace
   file finaldata_imputed.dta saved
239 .
240 .
242 . ********MODEL 6: MODEL 2+lifestyle/health-related factors******
243 .
244 .
245 .
246 . //AFRICAN-AMERICAN//
247 .
248 .
249 . use finaldata_imputed,clear
250 .
251 .
252 . //ANALYSIS B//
```

253 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputation estimates Linear regression | <pre>Imputations = Number of obs =</pre> | 5<br>81 |
|---|--|---------|
| 0   | Average RVI =                            | 0.0050  |
|   | Largest FMI =                            | 0.0237  |
|   | Complete DF =                            | 71      |
| DF adjustment: Small sample                     | DF: min =                                | 66.99   |
|   | avg =                                    | 68.69   |
|   | max =                                    | 69.07   |
| Model F test: <b>Equal FMI</b>                  | F( 9, 69.1) =                            | 6.83    |
| Within VCE type: OLS                            | Prob  >  F  =                            | 0.0000  |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 52.79532    | 81.05351  | 0.65  | 0.517 | -108.9108  | 214.5014  |
| Sex          | -31.564     | 83.34489  | -0.38 | 0.706 | -197.8295  | 134.7015  |
| w1Age        | -10.5986    | 4.571472  | -2.32 | 0.023 | -19.7192   | -1.477997 |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -208.4351   | 77.10842  | -2.70 | 0.009 | -362.2684  | -54.60187 |
| TIME_V1SCAN  | .0128306    | .0585855  | 0.22  | 0.827 | 1040518    | .129713   |
| w1BMI        | 6015527     | 5.646433  | -0.11 | 0.915 | -11.86614  | 10.66304  |
| w1currdrugs  | -113.0032   | 72.41868  | -1.56 | 0.123 | -257.5519  | 31.54537  |
| w1SRH        | -32.47239   | 41.89588  | -0.78 | 0.441 | -116.055   | 51.11022  |
| ICV_volM2    | .001838     | .0003342  | 5.50  | 0.000 | .0011712   | .0025048  |
| _cons        | 1857.287    | 456.8583  | 4.07  | 0.000 | 945.893    | 2768.681  |

254 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputation estimates  | Imputations         | = | 5      |
|--------------------------------|---------------------|---|--------|
| Linear regression              | Number of obs       | = | 81     |
|                                | Average RVI         | = | 0.0044 |
|                                | Largest FMI         | = | 0.0137 |
|                                | Complete DF         | = | 71     |
| DF adjustment: Small sample    | DF: min             | = | 68.03  |
|                                | avg                 | = | 68.80  |
|                                | max                 | = | 69.07  |
| Model F test: <b>Equal FMI</b> | F( <b>9, 69.1</b> ) | = | 7.69   |
| Within VCE type: OLS           | Prob > F            | = | 0.0000 |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 31.73023    | 77.19758  | 0.41  | 0.682 | -122.2796  | 185.7401  |
| Sex          | -44.14066   | 79.42456  | -0.56 | 0.580 | -202.5855  | 114.3042  |
| w1Age        | -8.475706   | 4.35457   | -1.95 | 0.056 | -17.1634   | .2119921  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -185.1999   | 73.46523  | -2.52 | 0.014 | -331.7637  | -38.63624 |
| TIME_V1SCAN  | .0319127    | .0558638  | 0.57  | 0.570 | 0795426    | .1433679  |
| w1BMI        | -4.095473   | 5.38087   | -0.76 | 0.449 | -14.83027  | 6.639324  |
| w1currdrugs  | -110.9852   | 68.67527  | -1.62 | 0.111 | -248.0233  | 26.05288  |
| w1SRH        | -17.85534   | 39.93514  | -0.45 | 0.656 | -97.52704  | 61.81636  |
| ICV_volM2    | .0019204    | .0003185  | 6.03  | 0.000 | .001285    | .0025557  |
| _cons        | 1978.866    | 435.3747  | 4.55  | 0.000 | 1110.33    | 2847.403  |

256 . //ANALYSIS C// 257 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if R

| Multiple-imputation estimates Linear regression |        | Imputation    |       | = | 5<br>80 |
|---|--------|---------------|-------|---|---------|
| J   |        | Average I     | RVI   | = | 0.0017  |
|   |        | Largest       | FMI   | = | 0.0119  |
|   |        | Complete      | DF    | = | 70      |
| DF adjustment: Small                            | sample | DF:           | min   | = | 67.22   |
|   |        | ;             | avg   | = | 67.97   |
|   |        | ı             | nax   | = | 68.08   |
| Model F test: <b>Equ</b>                        | al FMI | F( <b>9</b> , | 68.1) | = | 2.36    |
| Within VCE type:                                | OLS    | Prob > F      |       | = | 0.0221  |
|   |        |               |       |   |         |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 1.683195    | .8528114  | 1.97  | 0.052 | 0185549    | 3.384945  |
| Sex          | .8386885    | .8872528  | 0.95  | 0.348 | 9317587    | 2.609136  |
| w1Age        | .014372     | .048293   | 0.30  | 0.767 | 0819937    | .1107377  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 4175169     | .8115122  | -0.51 | 0.609 | -2.03683   | 1.201797  |
| TIME_V1SCAN  | 0006183     | .0006177  | -1.00 | 0.320 | 0018508    | .0006143  |
| w1BMI        | .0822632    | .0594609  | 1.38  | 0.171 | 0363872    | .2009136  |
| w1currdrugs  | .4615092    | .7605662  | 0.61  | 0.546 | -1.056497  | 1.979516  |
| w1SRH        | 6670958     | .4413241  | -1.51 | 0.135 | -1.547737  | .2135449  |
| ICV_volM2    | 4.37e-06    | 3.54e-06  | 1.24  | 0.221 | -2.69e-06  | .0000114  |
| _cons        | -3.844965   | 4.820451  | -0.80 | 0.428 | -13.46383  | 5.773897  |

258 .

259 . save, replace

file finaldata\_imputed.dta saved

260 .

261 .

263 . //WHITES//

264 .

265 . use finaldata\_imputed,clear

Multiple-imputation estimates

266 . 267 .

268 . //ANALYSIS B//

269 . mi estimate: reg Left\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

Imputations

| · · · · · · · · · · · · · · · · · · · |              |           |       |          |         |      | _         |
|---------------------------------------|--------------|-----------|-------|----------|---------|------|-----------|
| Linear regress                        | sion         |           |       | Number   | of obs  | =    | 119       |
|                                       |              |           |       | Average  | RVI     | =    | 0.0051    |
|                                       |              |           |       | Largest  | FMI     | =    | 0.0393    |
|                                       |              |           |       | Complete | e DF    | =    | 109       |
| DF adjustment                         | : Small samp | le        |       | DF:      | min     | =    | 99.38     |
| ū                                     | •            |           |       |          | avg     | =    | 106.16    |
|                                       |              |           |       |          | max     | =    | 107.02    |
| Model F test:                         | Equal F      | MI        |       | F( 9,    | 107.0)  | =    | 8.01      |
| Within VCE typ                        | pe: <b>0</b> | LS        |       | Prob >   | F       | =    | 0.0000    |
|                                       |              |           |       |          |         |      |           |
| Left_Hippo~s                          | Coefficient  | Std. err. | t     | P> t     | [95% c  | onf. | interval] |
| LnNFLw1                               | -65.77468    | 71.30482  | -0.92 | 0.358    | -207.13 | 15   | 75.58218  |
| Sex                                   | -53.89138    | 81.93871  | -0.66 | 0.512    | -216.3  | 26   | 108.5432  |
| w1Age                                 | -1.368479    | 4.027692  | -0.34 | 0.735    | -9.3530 | 67   | 6.616109  |
| Race                                  | 0            | (omitted) |       |          |         |      |           |
| PovStat                               | -28.35708    | 70.87702  | -0.40 | 0.690    | -168.86 | 27   | 112.1486  |
| TIME_V1SCAN                           | .0237825     | .0481839  | 0.49  | 0.623    | 07173   | 89   | .1193039  |
| w1BMI                                 | 2.335288     | 4.366467  | 0.53  | 0.594    | -6.3208 | 37   | 10.99141  |
| w1currdrugs                           | 51.95714     | 84.53373  | 0.61  | 0.540    | -115.76 | 81   | 219.6824  |
| w1SRH                                 | -18.81498    | 40.80678  | -0.46 | 0.646    | -99.70  | 95   | 62.07953  |
| ICV_volM2                             | .0018458     | .0002897  | 6.37  | 0.000    | .00127  | 15   | .0024202  |
| _cons                                 | 1322.831     | 457.5077  | 2.89  | 0.005    | 415.87  | 41   | 2229.787  |
| _                                     | 1            |           |       |          |         |      |           |

270 . mi estimate: reg Right\_Hippocampus LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputation estimates Linear regression  DF adjustment: Small sample |             |           |       | Imputat<br>Number<br>Average<br>Largest<br>Complet<br>DF: | of obs = RVI = FMI = | 5<br>119<br>0.0079<br>0.0650<br>109<br>91.64 |
|--|-------------|-----------|-------|---|----------------------|--|
|  |             |           |       |   | avg =<br>max =       | 105.37<br>107.04                             |
| Model F test:  | Equal F     | MI        |       | F( 9,   | 107.0) =             | 10.84  |
| Within VCE typ   | oe: 0       | LS        |       | Prob >  | F =                  | 0.0000                                       |
| Right_Hipp~s   | Coefficient | Std. err. | t     | P> t  | [95% conf            | . interval]                                  |
| LnNFLw1  | -69.98175   | 72.46297  | -0.97 | 0.336   | -213.6341            | 73.67058                                     |
| Sex  | -172.6985   | 83.27819  | -2.07 | 0.041   | -337.7884            | -7.608657                                    |
| w1Age  | 1.698971    | 4.095466  | 0.41  | 0.679   | -6.420069            | 9.818011                                     |
| Race   | 0           | (omitted) |       |   |                      |  |
| PovStat  | -3.211876   | 72.03591  | -0.04 | 0.965   | -146.0148            | 139.5911                                     |
| TIME_V1SCAN  | .0640992    | .0489585  | 1.31  | 0.193   | 0329571              | .1611554                                     |
| w1BMI  | 5.788114    | 4.440305  | 1.30  | 0.195   | -3.014507            | 14.59073                                     |
| w1currdrugs  | 40.45056    | 87.01603  | 0.46  | 0.643   | -132.3799            | 213.281                                      |
| w1SRH  | -30.24451   | 41.47382  | -0.73 | 0.467   | -112.4613            | 51.97228                                     |
| ICV_volM2  | .0024606    | .0002944  | 8.36  | 0.000   | .001877              | .0030443                                     |
| _cons  | 636.1527    | 465.1671  | 1.37  | 0.174   | -285.9957            | 1558.301                                     |

271 . 272 . //ANALYSIS C//

273 . mi estimate: reg LnLesion\_Volume LnNFLw1 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if R

| Multiple-imputation estimates  | Imputat | ions   | = | 5      |
|--------------------------------|---------|--------|---|--------|
| Linear regression              | Number  | of obs | = | 117    |
|                                | Average | RVI    | = | 0.0025 |
|                                | Largest | FMI    | = | 0.0090 |
|                                | Complet | e DF   | = | 107    |
| DF adjustment: Small sample    | DF:     | min    | = | 103.98 |
|                                |         | avg    | = | 104.82 |
|                                |         | max    | = | 105.03 |
| Model F test: <b>Equal FMI</b> | F( 9,   | 105.0) | = | 1.56   |
| Within VCE type: OLS           | Prob >  | F      | = | 0.1368 |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1      | 2.657083    | .9639268  | 2.76  | 0.007 | .7457385   | 4.568428  |
| Sex          | .0501591    | 1.052932  | 0.05  | 0.962 | -2.037623  | 2.137941  |
| w1Age        | 0267825     | .0538411  | -0.50 | 0.620 | 1335391    | .0799741  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 1.820711    | .9140025  | 1.99  | 0.049 | .0084093   | 3.633013  |
| TIME_V1SCAN  | 0005051     | .000619   | -0.82 | 0.416 | 0017324    | .0007223  |
| w1BMI        | .0222677    | .0565021  | 0.39  | 0.694 | 0897652    | .1343006  |
| w1currdrugs  | -1.017487   | 1.071573  | -0.95 | 0.345 | -3.142463  | 1.107489  |
| w1SRH        | .0503166    | .5307985  | 0.09  | 0.925 | -1.002159  | 1.102792  |
| ICV_volM2    | 1.48e-06    | 3.71e-06  | 0.40  | 0.691 | -5.88e-06  | 8.84e-06  |
| _cons        | -2.823941   | 5.860016  | -0.48 | 0.631 | -14.4433   | 8.795416  |

275 . save, replace

file finaldata\_imputed.dta saved

278 .

279 .

280 . //ANALYSIS B//

281 . mi estimate: reg Left\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_v

| Multiple-imputation estimates Linear regression | Imputations<br>Number of obs  | = | 5<br>200 |
|---|-------------------------------|---|----------|
| C .   | Average RVI                   | = | 0.0041   |
|   | Largest FMI                   | = | 0.0427   |
|   | Complete DF                   | = | 188      |
| DF adjustment: <b>Small sample</b>              | DF: min                       | = | 165.71   |
|   | avg                           | = | 184.25   |
|   | max                           | = | 186.03   |
| Model F test: <b>Equal FMI</b>                  | F( <b>11</b> , <b>186.0</b> ) | = | 13.69    |
| Within VCE type: OLS                            | Prob > F                      | = | 0.0000   |

| Left_Hippoca~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|----------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1        | -48.64755   | 61.80221  | -0.79 | 0.432 | -170.571   | 73.27586  |
| Race<br>AfrAm  | -156.8686   | 170.8386  | -0.92 | 0.360 | -493.9001  | 180.1629  |
| Race#c.LnNFLw1 |             |           |       |       |            |           |
| AfrAm          | 45.24384    | 84.56615  | 0.54  | 0.593 | -121.5897  | 212.0774  |
| Sex            | -43.29876   | 58.27456  | -0.74 | 0.458 | -158.2629  | 71.66537  |
| w1Age          | -4.576957   | 2.845275  | -1.61 | 0.109 | -10.19013  | 1.036216  |
| Race           | 0           | (omitted) |       |       |            |           |
| PovStat        | -92.57277   | 49.93564  | -1.85 | 0.065 | -191.0857  | 5.940183  |
| TIME_V1SCAN    | .0097324    | .0359059  | 0.27  | 0.787 | 0611029    | .0805678  |
| w1BMI          | 3349783     | 3.319264  | -0.10 | 0.920 | -6.883265  | 6.213309  |
| w1currdrugs    | -24.58969   | 55.69981  | -0.44 | 0.659 | -134.5624  | 85.38307  |
| w1SRH          | -26.2041    | 28.61596  | -0.92 | 0.361 | -82.65769  | 30.24949  |
| ICV_volM2      | .0017648    | .0002161  | 8.17  | 0.000 | .0013386   | .0021911  |
| _cons          | 1753.465    | 326.0792  | 5.38  | 0.000 | 1110.173   | 2396.758  |

282 . mi estimate: reg Right\_Hippocampus c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_

| Multiple-imputat  | ion estimates |           |       | Imputat:       | ions   | =     | 5         |
|-------------------|---------------|-----------|-------|----------------|--------|-------|-----------|
| Linear regression | n             |           |       | Number o       | of obs | =     | 200       |
|                   |               |           |       | Average        | RVI    | =     | 0.0061    |
|                   |               |           |       | Largest        | FMI    | =     | 0.0629    |
|                   |               |           |       | Complete       | e DF   | =     | 188       |
| DF adjustment:    | Small sample  | }         |       | DF:            | min    | =     | 150.65    |
|                   |               |           |       |                | avg    | =     | 182.95    |
|                   |               |           |       |                | max    | =     | 186.02    |
| Model F test:     | Equal FMI     |           |       | F( <b>11</b> , | 186.0) | =     | 16.80     |
| Within VCE type:  | OLS           | <b>;</b>  |       | Prob > 1       | F      | =     | 0.0000    |
| Right Hippoc~s    | Coefficient   | Std. err. | t     | P> t           | [95%   | conf. | interval] |
|                   |               |           |       |                |        |       |           |
| LnNFLw1           | -42.25704     | 62.4035   | -0.68 | 0.499          | -165.  | 3668  | 80.85271  |
| Race              |               |           |       |                |        |       |           |
| AfrAm             | -162.3819     | 172.5124  | -0.94 | 0.348          | -502.  | 7162  | 177.9524  |
| Race#c.LnNFLw1    |               |           |       |                |        |       |           |
| AfrAm             | 45.28748      | 85.40826  | 0.53  | 0.597          | -123.  | 2081  | 213.7831  |
| Sex               | -111.3459     | 58.84642  | -1.89 | 0.060          | -227.  | 4384  | 4.746595  |
| w1Age             | -2.720525     | 2.872763  | -0.95 | 0.345          | -8.38  | 7926  | 2.946877  |
| Race              | 0             | (omitted) |       |                |        |       |           |
| PovStat           | -74.67558     | 50.41835  | -1.48 |                | -174.  | 1408  | 24.78967  |
| TIME_V1SCAN       | .0384326      | .0362595  | 1.06  | 0.291          | 033    | 1005  | .1099657  |
| w1BMI             | .7237554      | 3.351797  | 0.22  | 0.829          | -5.88  | 8727  | 7.336237  |
| w1currdrugs       | -32.95051     | 56.8094   | -0.58 | 0.563          | -145.  | 1966  | 79.29554  |
| w1SRH             | -30.61871     | 28.89611  | -1.06 | 0.291          | -87.6  | 2507  | 26.38766  |
| ICV_volM2         | .0021592      | .0002182  | 9.90  | 0.000          | .001   | 7289  | .0025896  |
| _cons             | 1418.804      | 329.2663  | 4.31  | 0.000          | 769.   | 2231  | 2068.385  |

284 . //ANALYSIS C//

285 . mi estimate: reg LnLesion\_Volume c.LnNFLw1##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_vo

| Multiple-imputation estimates<br>Linear regression |                    |           | 1<br>4<br>1 | Imputatio<br>Number of<br>Average R<br>Largest F | obs<br>VI<br>MI      | =<br>=<br>=<br>= | 5<br>197<br>0.0004<br>0.0044 |
|--|--------------------|-----------|-------------|--|----------------------|------------------|------------------------------|
| DF adjustment:                                     | Small sample       |           |             |  | in<br>vg             | = = =            | 185<br>182.11<br>182.95      |
| Model F test:<br>Within VCE type:                  | Equal FMI<br>: OLS |           |             | m<br>F( <b>11,</b><br>Prob > F                   | ax<br><b>183.0</b> ) | =<br>=<br>=      | 183.03<br>2.12<br>0.0207     |
| <br>LnLesion_Vol~e                                 | Coefficient        | Std. err. | t           | P> t   | [95%                 | conf.            | interval                     |
| I nNFI w1  | 2 070982           | . 780222  | 2.65        | 0.009  | . 531                | 5961             | 3.61036                      |

| LnLesion_Vol~e          | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|-------------------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw1                 | 2.070982    | .780222   | 2.65  | 0.009 | .5315961   | 3.610367  |
| Race<br>AfrAm           | 1.391277    | 2.095068  | 0.66  | 0.507 | -2.742314  | 5.524868  |
| Race#c.LnNFLw1<br>AfrAm | 1335466     | 1.040807  | -0.13 | 0.898 | -2.187071  | 1.919978  |
|                         |             |           |       |       |            |           |
| Sex                     | .510148     | .7117305  | 0.72  | 0.474 | 8941033    | 1.914399  |
| w1Age                   | .0107698    | .0355435  | 0.30  | 0.762 | 0593578    | .0808975  |
| Race                    | 0           | (omitted) |       |       |            |           |
| PovStat                 | .7623311    | .610967   | 1.25  | 0.214 | 4431128    | 1.967775  |
| TIME_V1SCAN             | 0004687     | .000436   | -1.07 | 0.284 | 0013289    | .0003916  |
| w1BMI                   | .0443721    | .0405496  | 1.09  | 0.275 | 0356327    | .1243769  |
| w1currdrugs             | 0525179     | .6658194  | -0.08 | 0.937 | -1.36623   | 1.261195  |
| w1SRH                   | 2379911     | .3502468  | -0.68 | 0.498 | 9290313    | .4530492  |
| ICV_volM2               | 1.97e-06    | 2.63e-06  | 0.75  | 0.455 | -3.22e-06  | 7.15e-06  |
| cons                    | -3.637088   | 3.957832  | -0.92 | 0.359 | -11.44593  | 4.171757  |

```
286 .
287 . save, replace
   file finaldata_imputed.dta saved
```

 299 . \*\*Model 1\*\*

300 .

301 . use HANDLS\_paper51\_NFLBRAINSCANFINALIZED,clear

302 .

303 . //ANALYSIS B//

| Source       | SS          | df        | MS        | Number of obs                                       | = 90                 |
|--------------|-------------|-----------|-----------|---|----------------------|
| Model        | 5004386.06  | 6         | 834064.34 |   | = 11.23<br>= 0.0000  |
| Residual     | 6162497.51  | 83        | 74246.957 |   | = 0.4481             |
| Total        | 11166883.6  | 89        | 125470.60 | <ul> <li>Adj R-squared</li> <li>Root MSE</li> </ul> | = 0.4083<br>= 272.48 |
| 10001        | 2220000310  | 02        | 223470100 | L Nove Fish   | 2,2,40               |
| Left_Hippo~s | Coefficient | Std. err. | t         | P> t  | Beta                 |
| LnNFLw3      | -77.83375   | 51.05542  | -1.52     | 0.131   | 1486809              |
| Sex          | 23.78611    | 79.23054  | 0.30      | 0.765   | .0334621             |
| w1Age        | -6.283734   | 3.733138  | -1.68     | 0.096   | 1760947              |
| Race         | 0           | (omitted) |           |   | •                    |
| PovStat      | -166.5409   | 70.02901  | -2.38     | 0.020   | 2326336              |
| TIME_V1SCAN  | .00213      | .0515212  | 0.04      | 0.967   | .0037556             |
| ICV_volM2    | .0016211    | .0003258  | 4.98      | 0.000   | .552379              |
| _cons        | 1993.452    | 420.9212  | 4.74      | 0.000   | •                    |

| Source            | SS                      | df        | MS                       | Number of obs                                    | = 90                            |
|-------------------|-------------------------|-----------|--------------------------|--|---------------------------------|
| Model<br>Residual | 5358493.5<br>6184885.53 | 6<br>83   | 893082.251<br>74516.6931 | 1 R-squared                                      | = 11.98<br>= 0.0000<br>= 0.4642 |
| Total             | 11543379                | 89        | 129700.888               | <ul><li>Adj R-squared</li><li>Root MSE</li></ul> | = 0.4255<br>= 272.98            |
| Right_Hipp~s      | Coefficient             | Std. err. | t                        | P> t   | Beta                            |
| LnNFLw3           | -51.15552               | 51.14807  | -1.00                    | 0.320  | 0961123                         |
| Sex               | -7.175124               | 79.37433  | -0.09                    | 0.928  | 0099279                         |
| w1Age             | -6.847864               | 3.739913  | -1.83                    | 0.071  | 1887484                         |
| Race              | 0                       | (omitted) |                          |  | •                               |
| PovStat           | -157.201                | 70.1561   | -2.24                    | 0.028  | 2159764                         |
| TIME_V1SCAN       | .0137028                | .0516147  | 0.27                     | 0.791  | .0237627                        |
| ICV volM2         | .0018456                | .0003264  | 5.65                     | 0.000  | .6185251                        |
| _cons             | 1952.534                | 421.6851  | 4.63                     | 0.000  | •                               |

note: Race omitted because of collinearity.

| Source       | SS          | df        | MS        | Number of obs      | = | 88       |
|--------------|-------------|-----------|-----------|--------------------|---|----------|
|              |             |           |           | - F(6, 81)         | = | 1.37     |
| Model        | 125.029628  | 6         | 20.838271 | 4 Prob > F         | = | 0.2362   |
| Residual     | 1230.90659  | 81        | 15.196377 | <b>7</b> R-squared | = | 0.0922   |
|              |             |           |           | - Adj R-squared    | = | 0.0250   |
| Total        | 1355.93622  | 87        | 15.585473 | 8 Root MSE         | = | 3.8983   |
|              |             |           |           |                    |   |          |
| LnLesion_V~e | Coefficient | Std. err. | t         | P> t               |   | Beta     |
| LnNFLw3      | .1634156    | .7404861  | 0.22      | 0.826              |   | .0276807 |
| Sex          | .0910418    | 1.150313  | 0.08      | 0.937              |   | .0114883 |
| w1Age        | .0786772    | .0537296  | 1.46      | 0.147              |   | .1966781 |
| Race         | 0           | (omitted) |           |                    |   |          |
| PovStat      | -1.151197   | 1.01205   | -1.14     | 0.259              | - | .1447687 |
| TIME V1SCAN  | 0001397     | .0007394  | -0.19     | 0.851              | - | .0222658 |
| ICV_volM2    | 1.20e-06    | 4.69e-06  | 0.25      | 0.799              |   | .0367661 |
| _cons        | 2.054261    | 6.041545  | 0.34      | 0.735              |   | •        |
|              | 1           |           |           |                    |   |          |

309 .

310 .

311 . \*\*Model 2\*\*

312 .

313 . use finaldata\_imputed,clear

314 .

315 .

316 . //ANALYSIS B//

317 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

| Multiple-imputation estimates      | Imputations   | = | 5      |
|------------------------------------|---------------|---|--------|
| Linear regression                  | Number of obs | = | 90     |
|                                    | Average RVI   | = | 0.0846 |
|                                    | Largest FMI   | = | 0.4460 |
|                                    | Complete DF   | = | 82     |
| DF adjustment: <b>Small sample</b> | DF: min       | = | 16.60  |
|                                    | avg           | = | 70.67  |
|                                    | max           | = | 79.98  |
| Model F test: <b>Equal FMI</b>     | F( 7, 77.2)   | = | 8.91   |
| Within VCE type: OLS               | Prob > F      | = | 0.0000 |

| <br>Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|------------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3          | -86.58057   | 52.00977  | -1.66 | 0.100 | -190.1157  | 16.95458  |
| Sex              | 11.43773    | 80.35522  | 0.14  | 0.887 | -148.5098  | 171.3853  |
| w1Age            | -5.572734   | 3.817641  | -1.46 | 0.148 | -13.17324  | 2.027771  |
| Race             | 0           | (omitted) |       |       |            |           |
| PovStat          | -168.1413   | 69.84283  | -2.41 | 0.018 | -307.1336  | -29.14901 |
| TIME_V1SCAN      | .0049888    | .0515175  | 0.10  | 0.923 | 0975404    | .1075179  |
| w1BMI            | -4.935434   | 5.946197  | -0.83 | 0.418 | -17.50406  | 7.633194  |
| ICV_volM2        | .0016516    | .0003275  | 5.04  | 0.000 | .0009999   | .0023033  |
| _cons            | 2098.813    | 438.3978  | 4.79  | 0.000 | 1225.302   | 2972.324  |

318 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

| Multiple-impu                                  |   | Imputati  |                                 | =                                | = 5                                    |                                 |   |  |
|--|---|---|---------------------------------|----------------------------------|--|---------------------------------|---|--|
| Linear regres                                  | sion  |   |                                 | Number c                         | of obs                                 | =                               | 90  |  |
|  |   |   |                                 | Average                          | RVI                                    | =                               | 0.1039  |  |
|  |   |   |                                 | Largest                          | FMI                                    | =                               | 0.5021  |  |
|  |   |   |                                 | Complete                         | DF                                     | =                               | 82  |  |
| DF adjustment                                  | : Small samp  |   | DF:                             | min                              | =                                      | 13.74                           |   |  |
|  |   |   |                                 |                                  | avg                                    | g = <b>69.</b> 9                |   |  |
|  |   |   |                                 |                                  | max                                    | =                               | 79.95   |  |
| Model F test:                                  | Equal F   | MI  |                                 | F( <b>7</b> ,                    | 76.0)                                  | =                               | 9.37  |  |
| Within VCE ty                                  | pe: O   | LS  |                                 | Prob > F                         | :                                      | =                               | 0.0000  |  |
| Right_Hipp~s                                   | Coefficient   | Std. err.   | t                               | P> t                             | [95% c                                 | onf.                            | interval]                                     |  |
|  |   |   |                                 |                                  |  |                                 |   |  |
| I nNFI w3                                      | -60.73518   | 52.09126  | -1.17                           | 0.247                            | -164.44                                | 119                             | 42.97157                                      |  |
| LnNFLw3<br>Sex                                 | -60.73518<br>-20.64857                              | 52.09126<br>80.42103                                      | -1.17<br>-0.26                  | 0.247<br>0.798                   | -164.44<br>-180.73                     |                                 | 42.97157<br>139.4373                          |  |
| Sex  | -20.64857   | 80.42103  | -0.26                           | 0.798                            | -180.73                                | 345                             | 139.4373                                      |  |
| _  |   |   |                                 |                                  |  | 345                             |   |  |
| Sex<br>w1Age                                   | -20.64857<br>-6.06781                               | 80.42103<br>3.825795                                      | -0.26                           | 0.798                            | -180.73                                | 345<br>556                      | 139.4373                                      |  |
| Sex<br>w1Age<br>Race<br>PovStat                | -20.64857<br>-6.06781<br>0                          | 80.42103<br>3.825795<br>(omitted)                         | -0.26<br>-1.59                  | 0.798<br>0.117                   | -180.73<br>-13.685                     | 345<br>556<br>765               | 139.4373<br>1.549941                          |  |
| Sex<br>w1Age<br>Race                           | -20.64857<br>-6.06781<br>0<br>-158.9861             | 80.42103<br>3.825795<br>(omitted)<br>69.84154             | -0.26<br>-1.59<br>-2.28         | 0.798<br>0.117<br>0.025          | -180.73<br>-13.685<br>-297.97          | 345<br>556<br>765<br>525        | 139.4373<br>1.549941<br>-19.99571             |  |
| Sex<br>w1Age<br>Race<br>PovStat<br>TIME_V1SCAN | -20.64857<br>-6.06781<br>0<br>-158.9861<br>.0167922 | 80.42103<br>3.825795<br>(omitted)<br>69.84154<br>.0515247 | -0.26<br>-1.59<br>-2.28<br>0.33 | 0.798<br>0.117<br>0.025<br>0.745 | -180.73<br>-13.685<br>-297.97<br>08575 | 345<br>556<br>765<br>525<br>126 | 139.4373<br>1.549941<br>-19.99571<br>.1193369 |  |

319 . 320 . //ANALYSIS C//

321 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==2

| Multiple-imputation estimates  | Imputations   | = | 5      |
|--------------------------------|---------------|---|--------|
| Linear regression              | Number of obs | = | 88     |
|                                | Average RVI   | = | 0.1238 |
|                                | Largest FMI   | = | 0.5549 |
|                                | Complete DF   | = | 80     |
| DF adjustment: Small sample    | DF: min       | = | 11.50  |
|                                | avg           | = | 67.73  |
|                                | max           | = | 78.00  |
| Model F test: <b>Equal FMI</b> | F( 7, 72.9)   | = | 1.02   |
| Within VCE type: OLS           | Prob > F      | = | 0.4236 |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | .1912383    | .7636213  | 0.25  | 0.803 | -1.3301    | 1.712576  |
| Sex          | .1225369    | 1.176348  | 0.10  | 0.917 | -2.22035   | 2.465424  |
| w1Age        | .0765204    | .055493   | 1.38  | 0.172 | 0340398    | .1870806  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -1.126926   | 1.014976  | -1.11 | 0.270 | -3.147589  | .8937362  |
| TIME_V1SCAN  | 0001528     | .0007426  | -0.21 | 0.838 | 0016313    | .0013257  |
| w1BMI        | .0163555    | .0938308  | 0.17  | 0.865 | 1890726    | .2217836  |
| ICV_volM2    | 1.16e-06    | 4.77e-06  | 0.24  | 0.809 | -8.34e-06  | .0000107  |
| cons         | 1.62403     | 6.323829  | 0.26  | 0.798 | -10.9805   | 14.22856  |

323 . save, replace

file finaldata\_imputed.dta saved

324 . 325 .

326 .

327 .

220

330 . 331 . \*\*Model 1\*\*

332 .

333 . use HANDLS\_paper51\_NFLBRAINSCANFINALIZED,clear

334

335 . //ANALYSIS B//

| Source            | SS                       | df        | MS                     | Number of obs<br>- F(6, 116) |                      |  |
|-------------------|--------------------------|-----------|------------------------|------------------------------|----------------------|--|
| Model<br>Residual | 8641805.44<br>11021049.2 | 6<br>116  | 1440300.9<br>95009.044 | 1 Prob > F                   | = 0.0000<br>= 0.4395 |  |
| Total             | 19662854.6               | 122       | 161170.93              |                              | = 308.24             |  |
| Left_Hippo~s      | Coefficient              | Std. err. | t                      | P> t                         | Beta                 |  |
| LnNFLw3           | -161.5124                | 61.0588   | -2.65                  | 0.009                        | 2044254              |  |
| Sex               | -86.50687                | 75.26462  | -1.15                  | 0.253                        | 1077472              |  |
| w1Age             | -1.896913                | 3.733302  | -0.51                  | 0.612                        | 0389929              |  |
| Race              | 0                        | (omitted) |                        |                              |                      |  |
| PovStat           | -40.79105                | 67.70386  | -0.60                  | 0.548                        | 0442959              |  |
| TIME_V1SCAN       | 0041602                  | .0425112  | -0.10                  | 0.922                        | 0070506              |  |
| ICV_volM2         | .0019432                 | .0002616  | 7.43                   | 0.000                        | .7091219             |  |
| _cons             | 1607.868                 | 378.9366  | 4.24                   | 0.000                        | •                    |  |

| Source            | SS                       | df        | MS                       | Number of obs<br>F(6, 116)    | = 123<br>= 17.84     |
|-------------------|--------------------------|-----------|--------------------------|-------------------------------|----------------------|
| Model<br>Residual | 11278161.9<br>12219770.7 | 6<br>116  | 1879693.65<br>105342.851 | Frob > F<br>R-squared         | = 0.0000<br>= 0.4800 |
| Total             | 23497932.6               | 122       | 192606.005               | - Adj R-squared<br>6 Root MSE | = 0.4531<br>= 324.57 |
| Right_Hipp~s      | Coefficient              | Std. err. | t                        | P> t                          | Beta                 |
| LnNFLw3           | -108.5629                | 64.29368  | -1.69                    | 0.094                         | 1256952              |
| Sex               | -153.4434                | 79.25213  | -1.94                    | 0.055                         | 1748285              |
| w1Age             | 511575                   | 3.931091  | -0.13                    | 0.897                         | 0096196              |
| Race              | 0                        | (omitted) |                          |                               | •                    |
| PovStat           | -6.402222                | 71.2908   | -0.09                    | 0.929                         | 0063597              |
| TIME_V1SCAN       | .020352                  | .0447634  | 0.45                     | 0.650                         | .0315525             |
| ICV_volM2         | .002407                  | .0002755  | 8.74                     | 0.000                         | .8035284             |
| _cons             | 1089.432                 | 399.0126  | 2.73                     | 0.007                         | •                    |

339 . //ANALYSIS C//

| 121      | = | ber of obs | Num   | MS    | ı     | df   |       | SS          | Source           |
|----------|---|------------|-------|-------|-------|------|-------|-------------|------------------|
| 0.92     | = | , 114)     | - F(6 |       |       |      |       |             |                  |
| 0.4843   | = | b > F      | 5 Pro | 71885 | 14.74 | 6    |       | 88.4831307  | Model            |
| 0.0461   | = | quared     | 2 R-s | 14782 | 16.05 | 114  |       | 1829.86851  | Residual         |
| -0.0041  | = | R-squared  | - Adj |       |       |      |       |             |                  |
| 4.0064   | = | t MSE      | 7 Roc | 62637 | 15.98 | 120  |       | 1918.35164  | Total            |
| Beta     |   |            | P> t  | t     |       | err. | Std.  | Coefficient | <br>LnLesion_V~e |
| .0674691 |   |            | 0.511 | 66    | 0.    | 356  | .820  | .5412249    | LnNFLw3          |
| 0049271  |   |            | 0.968 | 04    | -0.   | 2657 | .981  | 0393996     | Sex              |
| .1236754 |   |            | 0.228 | 21    | 1.    | 271  | .050  | .0606084    | w1Age            |
|          |   |            |       |       |       | ed)  | (omit | 0           | Race             |
| .1432774 |   |            | 0.142 | 48    | 1.    | 1038 | .894  | 1.321153    | PovStat          |
| 0253116  |   |            | 0.790 | 27    | -0.   | 553  | .00   | 0001475     | TIME V1SCAN      |
| .1021093 |   |            | 0.416 | 82    | 0.    | -06  | 3.40  | 2.78e-06    | ICV volM2        |
|          |   |            | 0.451 | 76    | -0.   | 750  | 4.95  | -3.750709   | cons             |

341 .

342 .

343 . \*\*Model 2\*\*

344 .

345 . use finaldata\_imputed,clear

346 .

347 .

348 . //ANALYSIS B//

349 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

| Multiple-imputation estimates      | Imputations                  | = | 5      |
|------------------------------------|------------------------------|---|--------|
| Linear regression                  | Number of obs                | = | 123    |
|                                    | Average RVI                  | = | 0.0001 |
|                                    | Largest FMI                  | = | 0.0007 |
|                                    | Complete DF                  | = | 115    |
| DF adjustment: <b>Small sample</b> | DF: min                      | = | 113.01 |
|                                    | avg                          | = | 113.04 |
|                                    | max                          | = | 113.05 |
| Model F test: <b>Equal FMI</b>     | F( <b>7</b> , <b>113.1</b> ) | = | 13.09  |
| Within VCE type: OLS               | Prob > F                     | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -152.3608   | 61.94445  | -2.46 | 0.015 | -275.0833  | -29.63826 |
| Sex          | -76.03321   | 76.21644  | -1.00 | 0.321 | -227.0311  | 74.96464  |
| w1Age        | -1.798897   | 3.737884  | -0.48 | 0.631 | -9.204284  | 5.60649   |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -36.18377   | 67.95196  | -0.53 | 0.595 | -170.8082  | 98.44068  |
| TIME_V1SCAN  | 0004829     | .0427457  | -0.01 | 0.991 | 0851696    | .0842038  |
| w1BMI        | 3.982676    | 4.415444  | 0.90  | 0.369 | -4.765106  | 12.73046  |
| ICV_volM2    | .0019334    | .000262   | 7.38  | 0.000 | .0014143   | .0024526  |
| _cons        | 1451.613    | 416.939   | 3.48  | 0.001 | 625.5849   | 2277.641  |

350 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

| Multiple-impu      | tation estimat | es        |       | Imputat | ions =     | 5           |
|--------------------|----------------|-----------|-------|---------|------------|-------------|
| Linear regres      | sion           |           |       | Number  | of obs =   | 123         |
|                    |                |           |       | Average | RVI =      | 0.0009      |
|                    |                |           |       | Largest | FMI =      | 0.0073      |
|                    |                |           |       | Complet | e DF =     | 115         |
| DF adjustment      | : Small samp   | le        |       | DF:     | min =      | 112.13      |
|                    |                |           |       |         | avg =      | 112.90      |
|                    |                |           |       |         | max =      | 113.05      |
| Model F test:      | Equal F        | MI        |       | F( 7,   | , 113.0) = | 15.60       |
| Within VCE ty      | rpe: C         | LS        |       | Prob >  | F =        | 0.0000      |
| Right_Hipp~s       | Coefficient    | Std. err. | t     | P> t    | [95% conf  | . interval] |
| LnNFLw3            | -94.92075      | 64.99613  | -1.46 | 0.147   | -223.6893  | 33.84782    |
| Sex                | -137.81        | 79.97902  | -1.72 | 0.088   | -296.2628  | 20.64266    |
| w1Age              | 3656274        | 3.921824  | -0.09 | 0.926   | -8.13543   | 7.404175    |
| Race               | 0              | (omitted) |       |         |            |             |
| PovStat            | .4532121       | 71.29544  | 0.01  | 0.995   | -140.7952  | 141.7017    |
| TIME_V1SCAN        | .0258572       | .0448591  | 0.58  | 0.565   | 0630169    | .1147313    |
|                    |                | 4.647767  | 1.28  | 0.204   | -3.269293  | 15.14838    |
| w1BMI              | 5.939542       | 1.017707  |       |         |            |             |
| w1BMI<br>ICV_volM2 | 5.939542       | .0002749  | 8.70  | 0.000   | .0018478   | .0029372    |

351 .
352 . //ANALYSIS C//
353 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2 if Race==1

| Linear regression  | Multiple-imputati | ion estimates | Im | putat | ions   | = | 5      |
|--|-------------------|---------------|----|-------|--------|---|--------|
| Largest FMI  | Linear regression | า             | Nu | nber  | of obs | = | 121    |
| Complete DF   = 113                                      |                   |               | Av | erage | RVI    | = | 0.0001 |
| DF adjustment: Small sample                              |                   |               | La | rgest | : FMI  | = | 0.0013 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$     |                   |               | Co | nplet | e DF   | = | 113    |
| max = 111.05 Model F test: Equal FMI F( 7, 111.1) = 0.81 | DF adjustment:    | Small sample  | DF | :     | min    | = | 110.94 |
| Model F test: Equal FMI $F(7, 111.1) = 0.81$             |                   |               |    |       | avg    | = | 111.03 |
|  |                   |               |    |       | max    | = | 111.05 |
| Within VCE type: OLS $Prob > F$ = 0.5835                 | Model F test:     | Equal FMI     | F( | 7,    | 111.1) | = | 0.81   |
|  | Within VCE type:  | OLS           | Pr | ob >  | F      | = | 0.5835 |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | .5882311    | .8313572  | 0.71  | 0.481 | -1.059151  | 2.235613  |
| Sex          | .0246735    | .9967414  | 0.02  | 0.980 | -1.950426  | 1.999773  |
| w1Age        | .0612427    | .0502319  | 1.22  | 0.225 | 0382947    | .1607801  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 1.344475    | .8993881  | 1.49  | 0.138 | 437714     | 3.126664  |
| TIME_V1SCAN  | 0001243     | .0005579  | -0.22 | 0.824 | 0012298    | .0009811  |
| w1BMI        | .0242082    | .0579379  | 0.42  | 0.677 | 0906004    | .1390167  |
| ICV_volM2    | 2.72e-06    | 3.42e-06  | 0.80  | 0.427 | -4.05e-06  | 9.49e-06  |
| _cons        | -4.684969   | 5.451645  | -0.86 | 0.392 | -15.48773  | 6.117792  |

355 . save, replace

file finaldata\_imputed.dta saved

356 . 357 .

358 .

359 . //INTERACTION by Race//

360 .

361 .

362 . //ANALYSIS B//

363 . mi estimate: reg Left\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputation      | estimates  | Imputations   | = | 5      |
|--------------------------|------------|---------------|---|--------|
| Linear regression        |            | Number of obs | = | 213    |
|                          |            | Average RVI   | = | 0.0238 |
|                          |            | Largest FMI   | = | 0.1903 |
|                          |            | Complete DF   | = | 203    |
| DF adjustment: <b>Sm</b> | all sample | DF: min       | = | 72.42  |
|                          |            | avg           | = | 186.82 |
|                          |            | max           | = | 200.98 |
| Model F test:            | Equal FMI  | F( 9, 200.1)  | = | 19.73  |
| Within VCE type:         | OLS        | Prob > F      | = | 0.0000 |
|                          |            |               |   |        |

| Left_Hippoca~s          | Coefficient          | Std. err.             | t              | P> t           | [95% conf.           | . interval]          |
|-------------------------|----------------------|-----------------------|----------------|----------------|----------------------|----------------------|
| LnNFLw3                 | -151.4473            | 56.47005              | -2.68          | 0.008          | -262.8022            | -40.09239            |
| Race<br>AfrAm           | -202.503             | 161.7165              | -1.25          | 0.212          | -521.3827            | 116.3767             |
| Race#c.LnNFLw3<br>AfrAm | 64.63203             | 70.65579              | 0.91           | 0.361          | -74.6906             | 203.9547             |
| Sex                     | -32.25662            | 55.13015              | -0.59          | 0.559          | -140.9683            | 76.45506             |
| w1Age<br>Race           | -3.598899<br>0       | 2.628181<br>(omitted) | -1.37          | 0.172          | -8.781269            | 1.583471             |
| PovStat                 | -98.133              | 47.69902              | -2.06          | 0.041          | -192.1879            | -4.07814             |
| TIME_V1SCAN<br>w1BMI    | 0066589<br>1049891   | .0323769<br>3.501388  | -0.21<br>-0.03 | 0.837<br>0.976 | 0705008<br>-7.084194 | .057183<br>6.874215  |
| ICV_volM2<br>_cons      | .0017777<br>1897.544 | .0002003<br>312.1337  | 8.87<br>6.08   | 0.000<br>0.000 | .0013826<br>1281.879 | .0021727<br>2513.208 |

364 . mi estimate: reg Right\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputati | on estimates | Imputations   | = | 5      |
|-------------------|--------------|---------------|---|--------|
| Linear regression |              | Number of obs | = | 213    |
|                   |              | Average RVI   | = | 0.0255 |
|                   |              | Largest FMI   | = | 0.2019 |
|                   |              | Complete DF   | = | 203    |
| DF adjustment:    | Small sample | DF: min       | = | 67.47  |
|                   |              | avg           | = | 186.24 |
|                   |              | max           | = | 200.97 |
| Model F test:     | Equal FMI    | F( 9, 200.0)  | = | 22.41  |
| Within VCE type:  | OLS          | Prob > F      | = | 0.0000 |

| Right_Hippoc~s          | Coefficient          | Std. err.                 | t             | P> t           | [95% conf.           | interval]            |
|-------------------------|----------------------|---------------------------|---------------|----------------|----------------------|----------------------|
| LnNFLw3                 | -88.3631             | 58.75117                  | -1.50         | 0.134          | -204.2167            | 27.49052             |
| Race<br>AfrAm           | -111.3803            | 168.206                   | -0.66         | 0.509          | -443.0561            | 220.2954             |
| Race#c.LnNFLw3<br>AfrAm | 24.85043             | 73.49349                  | 0.34          | 0.736          | -120.0677            | 169.7686             |
| Sex                     | -81.98062            | 57.35505                  | -1.43         | 0.154          | -195.08              | 31.11876             |
| w1Age                   | -3.152741            | 2.7338                    | -1.15         | 0.250          | -8.543376            | 2.237895             |
| Race<br>PovStat         | 0<br>-77.13457       | (omitted) <b>49.61286</b> | -1.55         | 0.122          | -174.9632            | 20.69403             |
| TIME_V1SCAN<br>w1BMI    | .0130215<br>.5770315 | .0336776<br>3.664996      | 0.39<br>0.16  | 0.699<br>0.875 | 0533852<br>-6.737393 | .0794282<br>7.891456 |
| ICV_volM2<br>_cons      | .0021497<br>1509.882 | .0002084<br>324.7975      | 10.31<br>4.65 | 0.000<br>0.000 | .0017387<br>869.2287 | .0025606<br>2150.535 |

<sup>365 .</sup> 

367 . mi estimate: reg LnLesion\_Volume c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI ICV\_volM2

| Multiple-imputat  | ion estimates |           |       | Imputati | ons    | =     | 5         |
|-------------------|---------------|-----------|-------|----------|--------|-------|-----------|
| Linear regression | on            |           |       | Number o | f obs  | =     | 209       |
|                   |               |           |       | Average  |        | =     | 0.0489    |
|                   |               |           |       | Largest  | FMI    | =     | 0.3374    |
|                   |               |           |       | Complete | DF     | =     | 199       |
| DF adjustment:    | Small sample  | !         |       | DF:      | min    | =     | 32.72     |
|                   |               |           |       |          | avg    | =     | 177.24    |
|                   |               |           |       |          | max    | =     | 196.90    |
| Model F test:     | Equal FMI     |           |       | F( 9,    | 193.8) | =     | 0.99      |
| Within VCE type:  | OLS           | i         |       | Prob > F |        | =     | 0.4503    |
|                   |               |           |       |          |        |       |           |
| LnLesion_Vol~e    | Coefficient   | Std. err. | t     | P> t     | [95%   | conf. | interval] |
| LnNFLw3           | .4625488      | .7846582  | 0.59  | 0.556    | -1.0   | 8499  | 2.010088  |
| Race              |               |           |       |          |        |       |           |
| AfrAm             | .9659175      | 2.225513  | 0.43  | 0.665    | -3.42  | 2994  | 5.354829  |
| Race#c.LnNFLw3    |               |           |       |          |        |       |           |
| AfrAm             | 1667832       | .9784023  | -0.17 | 0.865    | -2.09  | 6288  | 1.762722  |
| Sex               | .1794058      | .7520854  | 0.24  | 0.812    | -1.30  | 3896  | 1.662708  |
| w1Age             | .0759393      | .0362378  | 2.10  | 0.037    | .004   | 4747  | .1474039  |
| Race              | 0             | (omitted) |       |          |        |       |           |
| PovStat           | .1385836      | .6539186  | 0.21  | 0.832    | -1.15  | 1001  | 1.428168  |
| TIME V1SCAN       | 0001753       | .0004384  | -0.40 | 0.690    | 001    | 0398  | .0006892  |
| w1BMI             | .0197112      | .0517548  | 0.38  | 0.706    | 085    | 6186  | .1250411  |
| ICV volM2         | 1.37e-06      | 2.71e-06  | 0.51  | 0.613    | -3.98  |       | 6.73e-06  |
| _cons             | -1.746124     | 4.277024  | -0.41 | 0.684    | -10.1  | 8884  | 6.696589  |

<sup>366 . //</sup>ANALYSIS C//

|                  |              | Largest FMI | = | 0.5001 |
|------------------|--------------|-------------|---|--------|
|                  |              | Complete DF | = | 80     |
| DF adjustment:   | Small sample | DF: min     | = | 13.73  |
|                  |              | avg         | = | 58.71  |
|                  |              | max         | = | 77.06  |
| Model F test:    | Equal FMI    | F( 9, 73.0) | = | 7.96   |
| Within VCE type: | OLS          | Prob > F    | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -111.9152   | 50.9332   | -2.20 | 0.031 | -213.3351  | -10.49531 |
| Sex          | 31.94398    | 80.86162  | 0.40  | 0.694 | -129.6578  | 193.5457  |
| w1Age        | -3.155386   | 3.875517  | -0.81 | 0.418 | -10.8802   | 4.569427  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -144.3797   | 68.82767  | -2.10 | 0.039 | -281.5405  | -7.2189   |
| TIME_V1SCAN  | 0076999     | .0497722  | -0.15 | 0.877 | 1068079    | .0914082  |
| w1BMI        | -6.648015   | 6.00803   | -1.11 | 0.288 | -19.55781  | 6.26178   |
| w1dxDiabetes | -53.16479   | 60.82632  | -0.87 | 0.391 | -178.7013  | 72.37168  |
| w1Glucose    | 3.359267    | 1.311113  | 2.56  | 0.014 | .7090929   | 6.009441  |
| ICV_volM2    | .0015087    | .0003243  | 4.65  | 0.000 | .0008624   | .0021549  |
| _cons        | 1928.408    | 423.8287  | 4.55  | 0.000 | 1083.703   | 2773.113  |

383 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_vol

90

0.1524

| Multiple-imputation | n estimates | Imputatio     | ns    | = | 5      |
|---------------------|-------------|---------------|-------|---|--------|
| Linear regression   |             | Number of     | obs   | = | 90     |
|                     |             | Average R     | VI    | = | 0.2158 |
|                     |             | Largest F     | MI    | = | 0.5417 |
|                     |             | Complete      | DF    | = | 80     |
| DF adjustment: Sr   | nall sample | DF: m         | in    | = | 12.00  |
|                     |             | a             | vg    | = | 54.40  |
|                     |             | m             | ax    | = | 75.75  |
| Model F test:       | Equal FMI   | F( <b>9</b> , | 69.7) | = | 8.73   |
| Within VCE type:    | OLS         | Prob > F      |       | = | 0.0000 |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -85.7926    | 49.97602  | -1.72 | 0.090 | -185.3338  | 13.74862  |
| Sex          | -2.088249   | 79.24424  | -0.03 | 0.979 | -160.5462  | 156.3698  |
| w1Age        | -3.760337   | 3.881799  | -0.97 | 0.336 | -11.51962  | 3.998946  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -133.2847   | 67.62835  | -1.97 | 0.053 | -268.131   | 1.56163   |
| TIME_V1SCAN  | .0028982    | .0489457  | 0.06  | 0.953 | 0946039    | .1004003  |
| w1BMI        | -7.478681   | 6.074917  | -1.23 | 0.242 | -20.71511  | 5.757745  |
| w1dxDiabetes | -31.56282   | 65.37209  | -0.48 | 0.636 | -171.1039  | 107.9783  |
| w1Glucose    | 3.657906    | 1.346355  | 2.72  | 0.011 | .8995478   | 6.416263  |
| ICV_volM2    | .0017364    | .0003167  | 5.48  | 0.000 | .0011053   | .0023674  |
| _cons        | 1876.253    | 416.2984  | 4.51  | 0.000 | 1046.1     | 2706.406  |

385 . //ANALYSIS C//

386 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM2

| Multiple-imputation estimates      | Imputations   | = | 5      |
|------------------------------------|---------------|---|--------|
| Linear regression                  | Number of obs | = | 88     |
| -                                  | Average RVI   | = | 0.1398 |
|                                    | Largest FMI   | = | 0.5095 |
|                                    | Complete DF   | = | 78     |
| DF adjustment: Small sample        | DF: min       | = | 13.21  |
|                                    | avg           | = | 58.05  |
|                                    | max           | = | 75.79  |
| Model F test: Equal FMI            | F( 9, 71.7)   | = | 0.81   |
| Within VCE type: OLS               | Prob > F      | = | 0.6112 |
| Interior V a Coefficient 5td ann t | D.  +         |   |        |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | .081054     | .8088437  | 0.10  | 0.920 | -1.534759  | 1.696867  |
| Sex          | .2211166    | 1.18717   | 0.19  | 0.853 | -2.143444  | 2.585677  |
| w1Age        | .0872831    | .0609015  | 1.43  | 0.157 | 0346609    | .2092271  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -1.049784   | 1.034596  | -1.01 | 0.314 | -3.110663  | 1.011095  |
| TIME V1SCAN  | 0001879     | .0007522  | -0.25 | 0.803 | 0016861    | .0013103  |
| w1BMI        | .0146452    | .0920319  | 0.16  | 0.876 | 1838496    | .2131401  |
| w1dxDiabetes | 4665552     | .9068798  | -0.51 | 0.611 | -2.327126  | 1.394015  |
| w1Glucose    | .0093166    | .0198867  | 0.47  | 0.642 | 0307982    | .0494315  |
| ICV volM2    | 6.42e-07    | 4.86e-06  | 0.13  | 0.895 | -9.04e-06  | .0000103  |
| _cons        | 1.181193    | 6.372724  | 0.19  | 0.853 | -11.51774  | 13.88013  |

387 . 388 . save, replace

file finaldata\_imputed.dta saved

389 .

390 .

392 . //WHITE//

393 .

394 . use finaldata\_imputed,clear

Multiple-imputation estimates

395 .

396 .

397 . //ANALYSIS B//

Linear regression

398 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM

Imputations

Number of obs

123

| Linear regress   | 32011        |           |       | Average       | RVI =            | 0.0025    |
|------------------|--------------|-----------|-------|---------------|------------------|-----------|
|                  |              |           |       | Largest       |                  | 0.0168    |
|                  |              |           |       | Complet       |                  | 113       |
| DF adjustment    | : Small samp | le        |       | DF:           | min =            | 108.50    |
| _                |              |           |       |               | avg =            | 110.60    |
|                  |              |           |       |               | max =            | 111.03    |
| Model F test:    | Equal F      | MI        |       | F( <b>9</b> , | <b>111.0</b> ) = | 10.10     |
| Within VCE typ   | oe: <b>0</b> | LS        |       | Prob >        | F =              | 0.0000    |
| <br>Left_Hippo~s | Coefficient  | Std. err. | t     | P> t          | [95% conf.       | interval] |
| LnNFLw3          | -162.5385    | 64.95978  | -2.50 | 0.014         | -291.2612        | -33.81571 |
| Sex              | -80.26945    | 76.88666  | -1.04 | 0.299         | -232.6256        | 72.08666  |
| w1Age            | -2.104017    | 3.795301  | -0.55 | 0.580         | -9.624657        | 5.416624  |
| Race             | 0            | (omitted) |       |               |                  |           |
| PovStat          | -41.73961    | 68.70901  | -0.61 | 0.545         | -177.8909        | 94.41166  |
| TIME_V1SCAN      | .0050812     | .0435763  | 0.12  | 0.907         | 0812685          | .091431   |
| w1BMI            | 2.997608     | 4.608286  | 0.65  | 0.517         | -6.134045        | 12.12926  |
| w1dxDiabetes     | 22.48763     | 57.85161  | 0.39  | 0.698         | -92.16491        | 137.1402  |
| w1Glucose        | .3601163     | 1.324881  | 0.27  | 0.786         | -2.265892        | 2.986124  |
| ICV_volM2        | .0019254     | .0002641  | 7.29  | 0.000         | .001402          | .0024488  |
| _cons            | 1484.8       | 434.1936  | 3.42  | 0.001         | 624.4131         | 2345.187  |

399 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_vol

| Multiple-imput<br>Linear regress |              | es        |       | Imputat<br>Number |                  |             |
|----------------------------------|--------------|-----------|-------|-------------------|------------------|-------------|
|                                  |              |           |       | Average           | RVI =            | 0.0043      |
|                                  |              |           |       | Largest           | FMI =            | 0.0197      |
|                                  |              |           |       | Complet           | e DF =           | 113         |
| DF adjustment:                   | : Small samp | le        |       | DF:               | min =            | 107.89      |
|                                  |              |           |       |                   | avg =            | 110.42      |
|                                  |              |           |       |                   | max =            | 111.03      |
| Model F test:                    | Equal F      | MI        |       | F( 9,             | <b>111.</b> 0) = | 11.93       |
| Within VCE typ                   | oe: O        | LS        |       | Prob >            | F =              | 0.0000      |
|                                  |              |           |       |                   |                  |             |
| Right_Hipp~s                     | Coefficient  | Std. err. | t     | P> t              | [95% conf        | . interval] |
| LnNFLw3                          | -99.47295    | 68.31826  | -1.46 | 0.148             | -234.8527        | 35.90682    |
| Sex                              | -137.5532    | 80.82045  | -1.70 | 0.092             | -297.7046        | 22.59829    |
| w1Age                            | 1375941      | 3.989931  | -0.03 | 0.973             | -8.043942        | 7.768754    |
| Race                             | 0            | (omitted) |       |                   |                  |             |
| PovStat                          | 1.121959     | 72.21858  | 0.02  | 0.988             | -141.9838        | 144.2277    |
| TIME_V1SCAN                      | .0241097     | .0458022  | 0.53  | 0.600             | 0666509          | .1148703    |
| w1BMI                            | 6.236047     | 4.860704  | 1.28  | 0.202             | -3.396716        | 15.86881    |
| w1dxDiabetes                     | -30.19223    | 60.81726  | -0.50 | 0.621             | -150.7229        | 90.33849    |
| w1Glucose                        | .5414893     | 1.394596  | 0.39  | 0.699             | -2.222873        | 3.305852    |
| ICV_volM2                        | .0024        | .0002776  | 8.64  | 0.000             | .0018498         | .0029501    |
| _cons                            | 796.8773     | 456.392   | 1.75  | 0.084             | -107.4981        | 1701.253    |

Linear regression

DF adjustment:

Model F test:

Within VCE type:

Small sample

Equal FMI

**OLS** 

400 . 401 . //ANALYSIS C// 402 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose ICV\_volM2 Multiple-imputation estimates Imputations 5 Linear regression Number of obs 121 Average RVI 0.0012 Largest FMI 0.0093 = Complete DF 111 DF adjustment: Small sample min 107.86 108.87 avg 109.05 max = Model F test: F( 9, 109.0) Equal FMI 0.62 Within VCE type: **OLS** Prob > F 0.7796 Coefficient Std. err. P>|t| [95% conf. interval] LnLesion\_V~e t LnNFLw3 .5708221 .8809234 0.65 0.518 -1.175148 2.316793 Sex .0256019 1.008645 0.03 0.980 -1.973489 2.024693 w1Age .0620431 .0510772 1.21 0.227 -.0391898 .163276 Race 0 (omitted) PovStat 1.346136 .9116664 1.48 0.143 -.4607496 3.153021 TIME\_V1SCAN -.0001309 .0005701 -0.23 0.819 -.0012608 .000999 0.42 .1455129 w1BMI .0252963 .0606549 0.677 -.0949203 w1dxDiabetes .7634077 -.0987849 -0.13 0.897 -1.611875 1.414306 -.0329755 w1Glucose .0017297 .0175084 0.10 0.921 .0364349 ICV volM2 2.75e-06 3.45e-06 0.80 0.428 -4.10e-06 9.60e-06 \_cons -4.878964 5.694473 -0.86 0.393 -16.16525 6.40732 404 . save, replace file finaldata\_imputed.dta saved 405 . 407 . //INTERACTION by Race// 408 . 409 . 410 . 411 . //ANALYSIS B// 412 . mi estimate: reg Left\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose Multiple-imputation estimates Imputations 5

Number of obs

Average RVI

Largest FMI

Complete DF

Prob > F

min

avg

max

F( 11, 197.5)

213

201

0.0373

0.2218

59.80

175.80 198.79

16.73

0.0000

| Left_Hippoca~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | . interval] |
|----------------|-------------|-----------|-------|-------|------------|-------------|
| LnNFLw3        | -181.9335   | 57.47664  | -3.17 | 0.002 | -295.2785  | -68.58863   |
| Race           |             |           |       |       |            |             |
| AfrAm          | -256.3139   | 162.2805  | -1.58 | 0.116 | -576.3412  | 63.71335    |
| Race#c.LnNFLw3 |             |           |       |       |            |             |
| AfrAm          | 89.79194    | 70.9852   | 1.26  | 0.207 | -50.19544  | 229.7793    |
| Sex            | -35.75052   | 54.98172  | -0.65 | 0.516 | -144.1883  | 72.68728    |
| w1Age          | -3.371734   | 2.651534  | -1.27 | 0.205 | -8.600585  | 1.857117    |
| Race           | 0           | (omitted) |       |       |            |             |
| PovStat        | -101.1394   | 47.31937  | -2.14 | 0.034 | -194.4518  | -7.827093   |
| TIME_V1SCAN    | 0027402     | .0323313  | -0.08 | 0.933 | 0665       | .0610196    |
| w1BMI          | -1.388923   | 3.595699  | -0.39 | 0.701 | -8.581886  | 5.804039    |
| w1dxDiabetes   | -7.280427   | 40.54681  | -0.18 | 0.858 | -87.58512  | 73.02427    |
| w1Glucose      | 1.716745    | .9015982  | 1.90  | 0.059 | 0627656    | 3.496255    |
| ICV_volM2      | .0017622    | .000199   | 8.86  | 0.000 | .0013699   | .0021546    |
| _cons          | 1843.053    | 316.6343  | 5.82  | 0.000 | 1218.283   | 2467.824    |

413 . mi estimate: reg Right\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose

| Multiple-imputat  | ion estimates |           |       | Imputati | ions   | =     | 5         |
|-------------------|---------------|-----------|-------|----------|--------|-------|-----------|
| Linear regression | n             |           |       | Number o | of obs | =     | 213       |
|                   |               |           |       | Average  | RVI    | =     | 0.0419    |
|                   |               |           |       | Largest  | FMI    | =     | 0.2270    |
|                   |               |           |       | Complete | DF     | =     | 201       |
| DF adjustment:    | Small sample  | <b>!</b>  |       | DF:      | min    | =     | 58.02     |
|                   |               |           |       |          | avg    | =     | 172.83    |
|                   |               |           |       |          | max    | =     | 198.73    |
| Model F test:     | Equal FMI     | •         |       | F( 11,   | 197.1) | =     | 18.79     |
| Within VCE type:  | OLS           | i         |       | Prob > F | Ī      | =     | 0.0000    |
| Right_Hippoc~s    | Coefficient   | Std. err. | t     | P> t     | [95%   | conf. | interval] |
| LnNFLw3           | -119.7271     | 59.9511   | -2.00 | 0.047    | -237.  | 9553  | -1.49898  |
|                   |               |           |       |          |        |       |           |
| Race              |               |           |       |          |        |       |           |
| AfrAm             | -164.0452     | 169.0113  | -0.97 | 0.333    | -497.  | 3464  | 169.256   |
| Race#c.LnNFLw3    |               |           |       |          |        |       |           |
| AfrAm             | 49.52696      | 73.94556  | 0.67  | 0.504    | -96.2  | 9925  | 195.3532  |
| Sex               | -84.39592     | 57.23404  | -1.47 | 0.142    | -197.  | 2744  | 28.48257  |
| w1Age             | -2.758916     | 2.764769  | -1.00 | 0.320    | -8.21  | 1189  | 2.693358  |
| Race              | 0             | (omitted) |       |          |        |       |           |
| PovStat           | -79.4835      | 49.28545  | -1.61 | 0.108    | -176   | .673  | 17.70606  |
| TIME_V1SCAN       | .0159507      | .0336757  | 0.47  | 0.636    | 050    | 4605  | .0823619  |
| w1BMI             | 5923965       | 3.755539  | -0.16 | 0.875    | -8.10  | 9858  | 6.925065  |
| w1dxDiabetes      | -21.65995     | 42.79646  | -0.51 | 0.614    | -106.  | 5837  | 63.26383  |
| w1Glucose         | 1.880004      | .9491039  | 1.98  | 0.049    |        | 1907  | 3.754816  |
| ICV_volM2         | .0021328      | .0002073  | 10.29 |          | .00    | 1724  | .0025416  |
| _cons             | 1437.188      | 328.7405  | 4.37  | 0.000    | 788.   | 6324  | 2085.744  |

415 . //ANALYSIS C//

416 . mi estimate: reg LnLesion\_Volume c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1dxDiabetes w1Glucose I

| Multiple-imputa<br>Linear regressio |              |           |       | Imputati<br>Number of<br>Average<br>Largest<br>Complete | of obs =<br>RVI =<br>FMI = | 209<br>0.0605<br>0.2868 |
|-------------------------------------|--------------|-----------|-------|---|----------------------------|-------------------------|
| DF adjustment:                      | Small sample | <b>!</b>  |       | DF:   |                            |                         |
| 3                                   | •            |           |       |   | avg =                      | 163.93                  |
|                                     |              |           |       |   | max =                      | 194.92                  |
| Model F test:                       | Equal FMI    |           |       | F( 11,  | 191.4) =                   | 0.82                    |
| Within VCE type:                    | : OLS        | •         |       | Prob > I  | · =                        | 0.6200                  |
| _nLesion_Vol~e                      | Coefficient  | Std. err. | t     | P> t  | [95% co                    | nf. interval]           |
| LnNFLw3                             | .3810725     | .8214916  | 0.46  | 0.643   | -1.2397                    | 2 2.001865              |
| Race                                |              |           |       |   |                            |                         |
| AfrAm                               | .8944973     | 2.258831  | 0.40  | 0.693   | -3.56049                   | 1 5.349486              |
| tace#c.LnNFLw3                      |              |           |       |   |                            |                         |
| AfrAm                               | 1268955      | .9951819  | -0.13 | 0.899   | -2.08967                   | 9 1.835888              |
| Sex                                 | .1970852     | .7546679  | 0.26  | 0.794   | -1.29133                   | 7 1.685507              |
| w1Age                               | .0795755     | .0372728  | 2.13  | 0.034   | .006050                    | 8 .1531002              |
| Race                                | 0            | (omitted) |       |   |                            |                         |
| PovStat                             | .1430401     | .6568549  | 0.22  | 0.828   | -1.15241                   | 5 1.438495              |
| TIME_V1SCAN                         | 000184       | .0004425  | -0.42 | 0.678   | 001056                     | 7 .0006888              |
| w1BMI                               | .0205247     | .0513996  | 0.40  | 0.692   | 083223                     | 4 .1242728              |
| w1dxDiabetes                        | 273918       | .5746522  | -0.48 | 0.635   | -1.41679                   | 9 .8689632              |
| w1Glucose                           | .0058827     | .0129674  | 0.45  | 0.651   | 019803                     | 3 .0315688              |
| ICV_volM2                           | 1.33e-06     | 2.73e-06  | 0.49  | 0.627   | -4.05e-0                   | 6 6.70e-06              |
| _cons                               | -2.193782    | 4.298273  | -0.51 | 0.610   | -10.6724                   | 2 6.284854              |

<sup>417</sup> 

418 . save, replace

file finaldata\_imputed.dta saved

419 .

421 . \*\*\*\*\*\*\*\*\*MODEL 4: MODEL 2+liver/kidney disease\*\*\*\*\*

422 .

423 . //AFRICAN-AMERICAN//

424 .

425 . use finaldata\_imputed,clear

426 .

427 . //ANALYSIS B//

428 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imputation estimates Imputations |                              |   | 5      |
|---|------------------------------|---|--------|
| Linear regression                         | Number of obs                | = | 90     |
|   | Average RVI                  | = | 0.4249 |
|   | Largest FMI                  | = | 0.7774 |
|   | Complete DF                  | = | 77     |
| DF adjustment: Small sample               | DF: min                      | = | 5.68   |
|   | avg                          | = | 39.75  |
|   | max                          | = | 74.38  |
| Model F test: <b>Equal FMI</b>            | F( <b>11</b> , <b>59.7</b> ) | = | 4.16   |
| Within VCE type: OLS                      | Prob > F                     | = | 0.0001 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -92.96865   | 53.98921  | -1.72 | 0.089 | -200.5669  | 14.62958  |
| Sex          | 27.40488    | 118.2398  | 0.23  | 0.819 | -221.9364  | 276.7461  |
| w1Age        | -5.626789   | 4.203599  | -1.34 | 0.185 | -14.00911  | 2.755534  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -161.6179   | 70.55979  | -2.29 | 0.025 | -302.1996  | -21.03622 |
| TIME_V1SCAN  | .0021665    | .0538505  | 0.04  | 0.968 | 1054008    | .1097337  |
| w1BMI        | -2.848072   | 6.562023  | -0.43 | 0.670 | -16.82942  | 11.13328  |
| w1Creatinine | 104.9097    | 192.6299  | 0.54  | 0.607 | -372.9689  | 582.7882  |
| w1USpecGrav  | -5243.858   | 5928.095  | -0.88 | 0.388 | -17708.62  | 7220.902  |
| w1BUN        | 2.448843    | 10.72588  | 0.23  | 0.821 | -19.46554  | 24.36323  |
| w1ALP        | .5264111    | 1.796854  | 0.29  | 0.773 | -3.271983  | 4.324805  |
| w1UricAcid   | -17.54674   | 24.49299  | -0.72 | 0.476 | -66.3812   | 31.28771  |
| ICV_volM2    | .0015478    | .0003654  | 4.24  | 0.000 | .0008108   | .0022848  |
| _cons        | 7433.31     | 6067.782  | 1.23  | 0.236 | -5312.224  | 20178.84  |

429 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imput<br>Linear regress   |  | es   |   | Imputat:<br>Number of<br>Average<br>Largest<br>Completo   | of obs = RVI = FMI =  | 5<br>90<br>0.4443<br>0.7756<br>77   |
|--|--|--|---|---|---|---|
| DF adjustment  |  | DF:  | min = avg =   | 5.71<br>38.70   |   |   |
| Model F test:<br>Within VCE typ  |  | F( <b>11,</b><br>Prob >  | ,   | 73.94<br>4.42<br>0.0001   |   |   |
| Right_Hipp~s   | Coefficient  | Std. err.  | t   | P> t  | [95% conf.  | . interval]   |
| LnNFLw3 Sex w1Age Race PovStat TIME_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w1ALP w1UricAcid ICV_volM2 _cons | -78.66985 -31.83598 -7.591517 0 -163.3996 .0283973 -5.522049 86.6832 -1999.021 10.50057 .7243415 -3.091847 .0018544 3994.797 | 53.71152<br>121.7728<br>4.26421<br>(omitted)<br>70.32936<br>.0531855<br>6.726679<br>191.0209<br>5856.837<br>10.65871<br>1.876581<br>24.72166<br>.0003611<br>6003.515 | -1.46<br>-0.26<br>-1.78<br>-2.32<br>0.53<br>-0.82<br>0.45<br>-0.34<br>0.99<br>0.39<br>-0.13<br>5.14<br>0.67 | 0.147<br>0.797<br>0.080<br>0.023<br>0.595<br>0.426<br>0.667<br>0.737<br>0.332<br>0.706<br>0.901<br>0.000<br>0.514 | -185.7149 -291.9476 -16.11095  -303.53570777592 -20.01961 -386.5001 -14285.83 -11.2701 -3.317221 -52.44846 .0011272 -8593.181 | 28.37523<br>228.2756<br>.9279139<br>-23.26343<br>.1345537<br>8.975509<br>559.8665<br>10287.79<br>32.27125<br>4.765904<br>46.26477<br>.0025815<br>16582.78 |

430 .

431 . //ANALYSIS C//

Multiple-imputation estimates

432 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w

Imputations

| Linear regress   | sion         |           |       | Number o       | of obs  | =    | 88        |
|------------------|--------------|-----------|-------|----------------|---------|------|-----------|
| •                |              |           |       | Average        | RVI     | =    | 0.7235    |
|                  |              |           |       | Largest        | FMI     | =    | 0.8873    |
|                  |              |           |       | Complete       | e DF    | =    | 75        |
| DF adjustment:   | : Small samp | ole       |       | DF:            | min     | =    | 3.76      |
|                  |              |           |       |                | avg     | =    | 34.16     |
|                  |              |           |       |                | max     | =    | 69.85     |
| Model F test:    | Equal I      | MI        |       | F( <b>11</b> , | 48.5)   | =    | 0.55      |
| Within VCE typ   | pe: (        | DLS       |       | Prob > F       | =       | =    | 0.8597    |
| <br>LnLesion_V~e | Coefficient  | Std. err. | t     | P> t           | [95% c  | onf. | interval] |
| LnNFLw3          | .2994173     | .7982659  | 0.38  | 0.709          | -1.2941 | 93   | 1.893028  |
| Sex              | .4957485     | 1.88954   | 0.26  | 0.797          | -3.5840 | 47   | 4.575544  |
| w1Age            | .0678047     | .0645797  | 1.05  | 0.299          | 06197   | 23   | .1975818  |
| Race             | 0            | (omitted) |       |                |         |      |           |
| PovStat          | -1.137844    | 1.036661  | -1.10 | 0.276          | -3.2054 | 75   | .9297871  |
| TIME V1SCAN      | 0003115      | .0007882  | -0.40 | 0.694          | 00188   | 99   | .001267   |
| w1BMI            | .0338678     | .1108144  | 0.31  | 0.767          | 21704   | 93   | .2847849  |
| w1Creatinine     | 2641991      | 3.805459  | -0.07 | 0.948          | -11.099 | 92   | 10.57153  |
| w1USpecGrav      | -51.57897    | 88.98922  | -0.58 | 0.571          | -241.00 | 71   | 137.8491  |
| w1BUN            | .1058372     | .1849091  | 0.57  | 0.576          | 29189   | 86   | .503573   |
| w1ALP            | 0184986      | .0248091  | -0.75 | 0.464          | 07001   | 84   | .0330212  |
| w1UricAcid       | 2957771      | .3783823  | -0.78 | 0.437          | -1.0508 | 89   | .4593349  |
| ICV_volM2        | 9.89e-07     | 5.32e-06  | 0.19  | 0.853          | -9.75e- | 06   | .0000117  |
| cons             | 55.91937     | 91.21157  | 0.61  | 0.549          | -138.20 | 92   | 250.048   |

433

434

435 .

436 .

437 .

438 . //WHITES//

439 .

440 . use finaldata\_imputed,clear

441 .

442 .

443 . //ANALYSIS B//

444 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imputation estimates  | Imputations                   | = | 5      |
|--------------------------------|-------------------------------|---|--------|
| Linear regression              | Number of obs                 | = | 123    |
|                                | Average RVI                   | = | 0.0330 |
|                                | Largest FMI                   | = | 0.2333 |
|                                | Complete DF                   | = | 110    |
| DF adjustment: Small sample    | DF: min                       | = | 43.31  |
|                                | avg                           | = | 96.36  |
|                                | max                           | = | 107.74 |
| Model F test: <b>Equal FMI</b> | F( <b>11</b> , <b>107.5</b> ) | = | 8.39   |
| Within VCE type: OLS           | Prob > F                      | = | 0.0000 |
|                                |                               |   |        |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -184.7849   | 66.89722  | -2.76 | 0.007 | -317.3982  | -52.17158 |
| Sex          | -115.8388   | 95.22853  | -1.22 | 0.227 | -304.6898  | 73.01217  |
| w1Age        | -1.569111   | 3.808775  | -0.41 | 0.681 | -9.118966  | 5.980745  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -28.15897   | 69.26289  | -0.41 | 0.685 | -165.4574  | 109.1395  |
| TIME V1SCAN  | 0016651     | .0449893  | -0.04 | 0.971 | 0908545    | .0875243  |
| w1BMI        | 1.99722     | 4.882583  | 0.41  | 0.683 | -7.681638  | 11.67608  |
| w1Creatinine | -15.3948    | 143.7113  | -0.11 | 0.915 | -305.1572  | 274.3676  |
| w1USpecGrav  | -580.6938   | 5760.134  | -0.10 | 0.920 | -12043.04  | 10881.65  |
| w1BUN        | 12.30748    | 7.927091  | 1.55  | 0.124 | -3.439205  | 28.05417  |
| w1ALP        | -1.184798   | 1.378222  | -0.86 | 0.392 | -3.917474  | 1.547877  |
| w1UricAcid   | 9.634461    | 24.62941  | 0.39  | 0.696 | -39.19646  | 58.46539  |
| ICV volM2    | .0019963    | .000276   | 7.23  | 0.000 | .0014492   | .0025434  |
| cons         | 1997.169    | 5765.68   | 0.35  | 0.730 | -9476.044  | 13470.38  |

445 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN

| Multiple-imput |              | Imputati  | ions  | =        | 5      |       |           |
|----------------|--------------|-----------|-------|----------|--------|-------|-----------|
| Linear regress | sion         |           |       | Number o | of obs | =     | 123       |
|                |              |           |       | Average  | RVI    | =     | 0.0985    |
|                |              |           |       | Largest  | FMI    | =     | 0.5287    |
|                |              |           |       | Complete | e DF   | =     | 110       |
| DF adjustment: | : Small samp | ole       |       | DF:      | min    | =     | 13.58     |
| _              |              |           |       |          | avg    | =     | 85.84     |
|                |              |           |       |          | max    | =     | 107.97    |
| Model F test:  | Equal F      | MI        |       | F( 11,   | 104.5) | =     | 9.08      |
| Within VCE typ | oe: C        | DLS       |       | Prob > I | ·      | =     | 0.0000    |
| ,              |              |           |       |          |        |       |           |
| Right_Hipp~s   | Coefficient  | Std. err. | t     | P> t     | [95%   | conf. | interval] |
| LnNFLw3        | -133.2344    | 71.32147  | -1.87 | 0.065    | -274.6 | 721   | 8.203437  |
| Sex            | -195.4325    | 103.4624  | -1.89 | 0.062    | -401.1 | 015   | 10.23658  |
| w1Age          | 645116       | 4.020303  | -0.16 | 0.873    | -8.614 | 106   | 7.323874  |
| Race           | 0            | (omitted) |       |          |        |       |           |
| PovStat        | -1.195291    | 73.02629  | -0.02 | 0.987    | -145.9 | 465   | 143.556   |
| TIME_V1SCAN    | .029679      | .0485231  | 0.61  | 0.542    | 066    | 635   | .125993   |
| w1BMI          | 3.586297     | 5.192638  | 0.69  | 0.491    | -6.709 | 847   | 13.88244  |
| w1Creatinine   | -7.255572    | 185.5907  | -0.04 | 0.969    | -406.4 | 631   | 391.9519  |
| w1USpecGrav    | 367.0535     | 6297.674  | 0.06  | 0.954    | -1223  | 4.3   | 12968.41  |
| w1BUN          | 7.348367     | 8.617389  | 0.85  | 0.397    | -9.832 | 385   | 24.52912  |
| w1ALP          | .6066126     | 1.457157  | 0.42  | 0.678    | -2.282 | 695   | 3.49592   |
| w1UricAcid     | 20.97633     | 26.53862  | 0.79  | 0.431    | -31.70 | 569   | 73.65835  |
| ICV_volM2      | .0024789     | .0002925  | 8.47  | 0.000    | .0018  | 989   | .0030589  |
| cons           | 349.2729     | 6308.184  | 0.06  | 0.956    | -12274 | .54   | 12973.09  |

446 .

447 . //ANALYSIS C//

448 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav w1BUN w

| Multiple-imput |              | Imputat   | ions  | =              | 5       |      |           |
|----------------|--------------|-----------|-------|----------------|---------|------|-----------|
| Linear regress | sion         |           |       | Number         | of obs  | =    | 121       |
|                |              |           |       | Average        | RVI     | =    | 0.0089    |
|                |              |           |       | Largest        |         | =    | 0.0462    |
|                |              |           |       | Complet        | e DF    | =    | 108       |
| DF adjustment: | : Small samp | ole       |       | DF:            | min     | =    | 96.58     |
|                |              |           |       |                | avg     | =    | 104.04    |
|                |              |           |       |                | max     | =    | 105.96    |
| Model F test:  | Equal F      | FMI       |       | F( <b>11</b> , | ,       | =    | 0.79      |
| Within VCE typ | oe: (        | DLS       |       | Prob >         | F       | =    | 0.6470    |
|                |              |           |       |                |         |      |           |
| LnLesion_V~e   | Coefficient  | Std. err. | t     | P> t           | [95% c  | onf. | interval] |
| LnNFLw3        | .3976857     | .8810086  | 0.45  | 0.653          | -1.3496 | 937  | 2.144409  |
| Sex            | 6192232      | 1.251418  | -0.49 | 0.622          | -3.1005 | 597  | 1.862151  |
| w1Age          | .0646094     | .0517258  | 1.25  | 0.214          | 03794   | 181  | .167167   |
| Race           | 0            | (omitted) |       |                |         |      |           |
| PovStat        | 1.174262     | .9229163  | 1.27  | 0.206          | 65551   | L69  | 3.004041  |
| TIME_V1SCAN    | 0002874      | .0005884  | -0.49 | 0.626          | 0014    | 154  | .0008792  |
| w1BMI          | 0046488      | .0655011  | -0.07 | 0.944          | 13452   | 241  | .1252266  |
| w1Creatinine   | .3134429     | 1.735341  | 0.18  | 0.857          | -3.1309 | 919  | 3.757805  |
| w1USpecGrav    | 110.5111     | 73.99869  | 1.49  | 0.138          | -36.254 | 104  | 257.2763  |
| w1BUN          | .0137195     | .1065327  | 0.13  | 0.898          | 19756   | 529  | .225002   |
| w1ALP          | 0049679      | .0181332  | -0.27 | 0.785          | 04092   | -    | .0309927  |
| w1UricAcid     | .1403288     | .3270803  | 0.43  | 0.669          | 50817   |      | .7888339  |
| ICV_volM2      | 2.63e-06     | 3.62e-06  | 0.73  | 0.469          | -4.54e- |      | 9.81e-06  |
| _cons          | -115.466     | 74.08147  | -1.56 | 0.122          | -262.39 | 985  | 31.4664   |
|                | l .          |           |       |                |         |      |           |

450 . save, replace

file finaldata\_imputed.dta saved

451 .

452 . \*\*INTERACTION by Race\*\*

453 .

454 .

455 .

456 . //ANALYSIS B//

457 . mi estimate: reg Left\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGra

| Multiple-imputation estimates | =             | 5 |        |
|-------------------------------|---------------|---|--------|
| Linear regression             | Number of obs | = | 213    |
|                               | Average RVI   | = | 0.2487 |
|                               | Largest FMI   | = | 0.7514 |
|                               | Complete DF   | = | 198    |
| DF adjustment: Small sample   | DF: min       | = | 7.29   |
|                               | avg           | = | 122.29 |
|                               | max           | = | 193.63 |
| Model F test: Equal FMI       | F( 13, 162.2) | = | 11.16  |
| Within VCE type: OLS          | Prob > F      | = | 0.0000 |

| Left_Hippoca~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | . interval] |
|----------------|-------------|-----------|-------|-------|------------|-------------|
| LnNFLw3        | -173.0177   | 60.18925  | -2.87 | 0.005 | -291.8727  | -54.16276   |
| Race<br>AfrAm  | -209.8847   | 167.952   | -1.25 | 0.213 | -541.5656  | 121.7963    |
| Race#c.LnNFLw3 |             |           |       |       |            |             |
| AfrAm          | 73.76265    | 71.96131  | 1.03  | 0.307 | -68.21947  | 215.7448    |
| Sex            | -37.51981   | 69.28495  | -0.54 | 0.589 | -174.8342  | 99.79462    |
| w1Age          | -4.136693   | 2.702405  | -1.53 | 0.127 | -9.466623  | 1.193236    |
| Race           | 0           | (omitted) |       |       |            |             |
| PovStat        | -92.93651   | 48.19027  | -1.93 | 0.055 | -187.9883  | 2.115297    |
| TIME_V1SCAN    | 0084496     | .0329709  | -0.26 | 0.798 | 0734929    | .0565937    |
| w1BMI          | 0039324     | 3.790649  | -0.00 | 0.999 | -7.552086  | 7.544221    |
| w1Creatinine   | 50.87117    | 141.2618  | 0.36  | 0.729 | -280.5177  | 382.26      |
| w1USpecGrav    | -2276.795   | 3912      | -0.58 | 0.562 | -10083.1   | 5529.513    |
| w1BUN          | 8.928807    | 6.398758  | 1.40  | 0.168 | -3.872911  | 21.73053    |
| w1ALP          | 1588815     | 1.16911   | -0.14 | 0.893 | -2.553609  | 2.235846    |
| w1UricAcid     | -6.224255   | 17.31889  | -0.36 | 0.720 | -40.4365   | 27.98799    |
| ICV_volM2      | .0017647    | .000207   | 8.52  | 0.000 | .0013562   | .0021732    |
| cons           | 4182.111    | 3939.966  | 1.06  | 0.292 | -3675.934  | 12040.16    |

458 . mi estimate: reg Right\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGr

| Multiple-imputat<br>Linear regressio |                | 5         |       | Imputati<br>Number o<br>Average<br>Largest | f obs<br>RVI<br>FMI | =<br>=<br>=<br>= | 5<br>213<br>0.2234<br>0.7019 |
|--------------------------------------|----------------|-----------|-------|--|---------------------|------------------|------------------------------|
| DF adjustment:                       | Small sample   | <u>.</u>  |       | Complete DF:                               | min                 | =                | 198<br>8.50                  |
| Di adjustilicire.                    | Jilaii Jalipic | -         |       |  | avg                 | =                | 119.45                       |
|                                      |                |           |       |  | max                 | =                | 193.95                       |
| Model F test:                        | Equal FM1      | [         |       | F( 13,                                     |                     | =                | 13.01                        |
| Within VCE type:                     | •              |           |       | Prob > F                                   | ,                   | =                | 0.0000                       |
|                                      |                |           |       |  |                     |                  |                              |
| Right_Hippoc~s                       | Coefficient    | Std. err. | t     | P> t                                       | [95%                | conf.            | interval]                    |
| LnNFLw3                              | -122.4457      | 62.49746  | -1.96 | 0.052                                      | -245.               | 8409             | .9494516                     |
| Race                                 |                |           |       |  |                     |                  |                              |
| AfrAm                                | -134.6892      | 173.9717  | -0.77 | 0.440                                      | -478.               | 1481             | 208.7698                     |
| Race#c.LnNFLw3                       |                |           |       |  |                     |                  |                              |
| AfrAm                                | 38.85072       | 74.63599  | 0.52  | 0.603                                      | -108.               | 3889             | 186.0903                     |
| Sex                                  | -103.5457      | 72.13053  | -1.44 | 0.154                                      | -246.               | 5163             | 39.42489                     |
| w1Age                                | -3.954329      | 2.817621  | -1.40 | 0.162                                      | -9.51               | 1821             | 1.603164                     |
| Race                                 | 0              | (omitted) |       |  |                     |                  |                              |
| PovStat                              | -76.42826      | 49.97858  | -1.53 | 0.128                                      | -174.               | 9995             | 22.14303                     |
| TIME_V1SCAN                          | .0139083       | .0341959  | 0.41  | 0.685                                      | 053                 | 5442             | .0813608                     |
| w1BMI                                | 3363971        | 3.983705  | -0.08 | 0.933                                      | -8.28               | 4536             | 7.611742                     |
| w1Creatinine                         | 48.21112       | 135.9237  | 0.35  | 0.731                                      | -262.               | 0198             | 358.442                      |
| w1USpecGrav                          | -63.00852      | 4241.67   | -0.01 | 0.988                                      | -8606               | . 399            | 8480.382                     |
| w1BUN                                | 7.696578       | 6.74232   | 1.14  | 0.259                                      | -5.83               | 0896             | 21.22405                     |
| w1ALP                                | .846844        | 1.204849  | 0.70  | 0.488                                      | -1.61               | 4062             | 3.30775                      |
| w1UricAcid                           | 6.005237       | 18.04426  | 0.33  | 0.740                                      | -29.6               | 4445             | 41.65493                     |
| ICV_volM2                            | .002155        | .000215   | 10.02 | 0.000                                      | .001                | 7307             | .0025792                     |
| _cons                                | 1485.517       | 4265.025  | 0.35  | 0.729                                      | -709                | 5.98             | 10067.01                     |

460 . //ANALYSIS C//

461 . mi estimate: reg LnLesion\_Volume c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1Creatinine w1USpecGrav

| Multiple-imputat<br>Linear regressio |              |           |       | Imputati<br>Number of<br>Average<br>Largest | of obs<br>RVI<br>FMI | =<br>=<br>= | 5<br>209<br>0.2697<br>0.7592 |
|--------------------------------------|--------------|-----------|-------|---|----------------------|-------------|------------------------------|
| DE addination                        | C==11==1-    |           |       | Complete                                    | e DF<br>min          | =           | 194                          |
| DF adjustment:                       | Small sample |           |       | DF:   |                      | =           | 7.09<br>111.62               |
|                                      |              |           |       |   | avg<br>max           | =           | 189.23                       |
| Model F test:                        | Equal FMI    |           |       | F( 13,                                      |                      | =           | 0.68                         |
| Within VCE type:                     | •            |           |       | Prob > 1                                    | ,                    | _           | 0.7802                       |
| within ver type.                     | ULS          | '         |       | P1'00 / 1                                   |                      | _           | 0.7802                       |
| LnLesion_Vol~e                       | Coefficient  | Std. err. | t     | P> t  | [95%                 | conf.       | interval]                    |
| LnNFLw3                              | .3463664     | .8326459  | 0.42  | 0.678                                       | -1.298               | 8532        | 1.991265                     |
| Race                                 |              |           |       |   |                      |             |                              |
| AfrAm                                | .9312203     | 2.301496  | 0.40  | 0.686                                       | -3.61                | 1168        | 5.473609                     |
|                                      |              |           |       |   |                      |             |                              |
| Race#c.LnNFLw3                       |              |           |       |   |                      |             |                              |
| AfrAm                                | 0735275      | .9952696  | -0.07 | 0.941                                       | -2.037               | 7017        | 1.889962                     |
| Sex                                  | .0257458     | 1.036413  | 0.02  | 0.980                                       | -2.05                | 5347        | 2.106838                     |
| w1Age                                | .0757717     | .0382004  | 1.98  | 0.049                                       | .0003                | 3951        | .1511482                     |
| Race                                 | 0            | (omitted) |       |   |                      |             |                              |
| PovStat                              | .1256467     | .6656902  | 0.19  | 0.850                                       | -1.187               | 7584        | 1.438877                     |
| TIME_V1SCAN                          | 0002166      | .0004462  | -0.49 | 0.628                                       | 0016                 | 9967        | .0006635                     |
| w1BMI                                | .0041166     | .0572438  | 0.07  | 0.943                                       | 1122                 | 2349        | .120468                      |
| w1Creatinine                         | 2056474      | 1.995253  | -0.10 | 0.921                                       | -4.91                | 1121        | 4.499915                     |
| w1USpecGrav                          | 33.05516     | 57.7414   | 0.57  | 0.571                                       | -84.03               | 3173        | 150.142                      |
| w1BUN                                | .0650253     | .0916686  | 0.71  | 0.481                                       | 1187                 | 7333        | .2487839                     |
| w1ALP                                | 0083956      | .0151015  | -0.56 | 0.581                                       | 0388                 | 3072        | .0220159                     |
| w1UricAcid                           | 0025503      | .2462297  | -0.01 | 0.992                                       | 4889                 | 9459        | .4838453                     |
| ICV_volM2                            | 1.68e-06     | 2.83e-06  | 0.59  | 0.554                                       | -3.91                | e-06        | 7.27e-06                     |
| _cons                                | -34.91661    | 57.99396  | -0.60 | 0.551                                       | -152.3               | 3758        | 82.54261                     |
|                                      |              |           |       |   |                      |             |                              |

462 .

463 . save, replace

file finaldata\_imputed.dta saved

464 .

465 .

466 . \*\*\*\*\*\*\*\*MODEL 5: MODEL2+OXIDATIVE STRESS\*\*\*\*\*

467 .

468 . //AFRICAN-AMERICAN//

469 .

470 . use finaldata\_imputed,clear

472 .

473 . //ANALYSIS B//

474 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imput<br>Linear regress |              |           | Imputat<br>Number<br>Average<br>Largest | of obs<br>RVI<br>FMI | =<br>=<br>=<br>= | 5<br>90<br>0.2277<br>0.5065 |                |
|----------------------------------|--------------|-----------|---|----------------------|------------------|-----------------------------|----------------|
| DE adjustment                    | . Small samn | 10        |   | Complet DF:          | ce DF<br>min     | =                           | 79<br>13.39    |
| DF adjustment                    | : Small samp | те        |   | DF:                  |                  | =                           |                |
|                                  |              |           |   |                      | avg<br>max       | =                           | 49.65<br>76.42 |
| Model F test:                    | Faucl F      | мт        |   | F/ 10                |                  | =                           | 5.45           |
|                                  | Equal F      |           |   | F( 10                | •                | =                           |                |
| Within VCE typ                   | be: C        | OLS       |   | Prob >               | F                | =                           | 0.0000         |
| Left_Hippo~s                     | Coefficient  | Std. err. | t                                       | P> t                 | [95% co          | nf.                         | interval]      |
| LnNFLw3                          | -91.75464    | 53.05646  | -1.73                                   | 0.088                | -197.429         | 5                           | 13.92023       |
| Sex                              | 7.966992     | 81.94806  | 0.10                                    | 0.923                | -155.232         | 1                           | 171.1661       |
| w1Age                            | -5.187935    | 3.941814  | -1.32                                   | 0.192                | -13.0413         | 8                           | 2.66551        |
| Race                             | 0            | (omitted) |   |                      |                  |                             |                |
| PovStat                          | -166.8549    | 72.14477  | -2.31                                   | 0.023                | -310.588         | 3                           | -23.12151      |
| TIME V1SCAN                      | .0072259     | .0543917  | 0.13                                    | 0.895                | 101226           | 9                           | .1156787       |
| w1BMI                            | -4.057956    | 6.611119  | -0.61                                   | 0.550                | -18.2978         | 6                           | 10.18195       |
| w1TotalD                         | 6560079      | 5.501604  | -0.12                                   | 0.907                | -12.3497         | 5                           | 11.03773       |
| w1Albumin                        | 72.78899     | 127.9652  | 0.57                                    | 0.575                | -193.06          | 7                           | 338.645        |
| w1EosinPct                       | 5.631971     | 20.18725  | 0.28                                    | 0.783                | -36.0944         | 4                           | 47.35838       |
| ICV_volM2                        | .0016375     | .0003423  | 4.78                                    | 0.000                | .000955          | 3                           | .0023196       |
| cons                             | 1763.726     | 773.0671  | 2.28                                    | 0.031                | 178.565          | 8                           | 3348.886       |

475 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imputation estimates | Imputations   | = | 5      |
|-------------------------------|---------------|---|--------|
| Linear regression             | Number of obs | = | 90     |
| _                             | Average RVI   | = | 0.2246 |
|                               | Largest FMI   | = | 0.5446 |
|                               | Complete DF   | = | 79     |
| DF adjustment: Small sample   | DF: min       | = | 11.84  |
|                               | avg           | = | 50.41  |
|                               | max           | = | 75.58  |
| Model F test: Equal FMI       | F( 10, 70.2)  | = | 5.94   |
| Within VCE type: OLS          | Prob > F      | = | 0.0000 |
|                               |               |   |        |
|                               |               |   |        |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -64.18527   | 52.944    | -1.21 | 0.229 | -169.6419  | 41.2714   |
| Sex          | -26.73066   | 82.34018  | -0.32 | 0.746 | -190.7774  | 137.3161  |
| w1Age        | -5.350199   | 3.934493  | -1.36 | 0.178 | -13.18973  | 2.489332  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -165.0015   | 71.71984  | -2.30 | 0.024 | -307.8667  | -22.13643 |
| TIME V1SCAN  | .0113948    | .053807   | 0.21  | 0.833 | 0958292    | .1186188  |
| w1BMI        | -5.433676   | 6.810594  | -0.80 | 0.441 | -20.29475  | 9.427402  |
| w1TotalD     | -3.857931   | 4.846492  | -0.80 | 0.432 | -13.74592  | 6.030058  |
| w1Albumin    | 52.57338    | 128.8718  | 0.41  | 0.688 | -216.0829  | 321.2296  |
| w1EosinPct   | 6.728576    | 20.84761  | 0.32  | 0.750 | -36.87499  | 50.33214  |
| ICV volM2    | .0018963    | .0003388  | 5.60  | 0.000 | .0012212   | .0025713  |
| _cons        | 1865.06     | 783.6185  | 2.38  | 0.025 | 250.0629   | 3480.057  |

485

486 . use finaldata\_imputed,clear

487 .

488 .

489 .

490 . //ANALYSIS B//

491 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imputation | on estimates | Impu      | Imputations |     |        |
|---------------------|--------------|-----------|-------------|-----|--------|
| Linear regression   | Numb         | er of obs | =           | 123 |        |
|                     |              | Aver      | age RVI     | =   | 0.0264 |
|                     |              | Larg      | est FMI     | =   | 0.1151 |
|                     |              | Comp      | lete DF     | =   | 112    |
| DF adjustment:      | Small sample | DF:       | min         | =   | 76.31  |
|                     |              |           | avg         | =   | 103.69 |
|                     |              |           | max         | =   | 110.01 |
| Model F test:       | Equal FMI    | F(        | 10, 109.7)  | =   | 8.75   |
| Within VCE type:    | OLS          | Prob      | > F         | =   | 0.0000 |
|                     |              |           |             |     |        |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -148.2941   | 63.17118  | -2.35 | 0.021 | -273.4848  | -23.10351 |
| Sex          | -85.88111   | 80.12936  | -1.07 | 0.286 | -244.6787  | 72.9165   |
| w1Age        | -1.651242   | 3.798191  | -0.43 | 0.665 | -9.178364  | 5.87588   |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -34.84894   | 69.28068  | -0.50 | 0.616 | -172.1538  | 102.456   |
| TIME_V1SCAN  | .0057101    | .0445763  | 0.13  | 0.898 | 0826309    | .094051   |
| w1BMI        | 4.487381    | 4.6521    | 0.96  | 0.337 | -4.73218   | 13.70694  |
| w1TotalD     | 1991145     | 3.011364  | -0.07 | 0.947 | -6.193274  | 5.795045  |
| w1Albumin    | 67.67946    | 116.5703  | 0.58  | 0.563 | -163.3955  | 298.7544  |
| w1EosinPct   | -3.177737   | 15.23193  | -0.21 | 0.835 | -33.51279  | 27.15731  |
| ICV volM2    | .0019472    | .0002672  | 7.29  | 0.000 | .0014176   | .0024768  |
| _cons        | 1122.167    | 736.9305  | 1.52  | 0.131 | -338.4344  | 2582.769  |

492 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct

| Multiple-imput | Multiple-imputation estimates |           |       |                | ions   | =     | 5         |
|----------------|-------------------------------|-----------|-------|----------------|--------|-------|-----------|
| Linear regress | sion                          |           |       | Number         | of obs | =     | 123       |
|                |                               |           |       | Average        | RVI    | =     | 0.0225    |
|                |                               |           |       | Largest        | FMI    | =     | 0.1025    |
|                |                               |           |       | Complet        | e DF   | =     | 112       |
| DF adjustment: | : Small samp                  | ole       |       | DF:            | min    | =     | 80.74     |
|                |                               |           |       |                | avg    | =     | 104.33    |
|                |                               |           |       |                | max    | =     | 110.01    |
| Model F test:  | Equal F                       | MI        |       | F( <b>10</b> , | 109.8) | =     | 10.54     |
| Within VCE typ | oe: C                         | DLS       |       | Prob >         | F      | =     | 0.0000    |
|                |                               |           |       |                |        |       |           |
| Right_Hipp~s   | Coefficient                   | Std. err. | t     | P> t           | [95%   | conf. | interval] |
| LnNFLw3        | -95.20646                     | 66.2453   | -1.44 | 0.154          | -226.4 | 919   | 36.07895  |
| Sex            | -133.173                      | 84.31339  | -1.58 | 0.117          | -300.  | 282   | 33.93595  |
| w1Age          | 3349714                       | 3.982356  | -0.08 | 0.933          | -8.227 | 187   | 7.557245  |
| Race           | 0                             | (omitted) |       |                |        |       |           |
| PovStat        | -6.017036                     | 72.46596  | -0.08 | 0.934          | -149.6 | 283   | 137.5943  |
| TIME_V1SCAN    | .0198079                      | .0466759  | 0.42  | 0.672          | 0726   | 927   | .1123086  |
| w1BMI          | 5.235073                      | 4.908071  | 1.07  | 0.289          | -4.494 | 1005  | 14.96415  |
| w1TotalD       | -1.935218                     | 3.146601  | -0.62 | 0.540          | -8.196 | 274   | 4.325839  |
| w1Albumin      | -41.49771                     | 122.5583  | -0.34 | 0.736          | -284.4 | 813   | 201.4858  |
| w1EosinPct     | 5.27367                       | 15.70658  | 0.34  | 0.738          | -25.94 | 235   | 36.48969  |
| ICV_volM2      | .0023891                      | .0002804  | 8.52  | 0.000          | .0018  | 334   | .0029448  |
| _cons          | 1111.331                      | 774.5887  | 1.43  | 0.154          | -424.6 | 902   | 2646.752  |

493

494 . //ANALYSIS C//

495 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1EosinPct I

| Multiple-imputation | on estimates | Imputations                   | = | 5      |
|---------------------|--------------|-------------------------------|---|--------|
| Linear regression   |              | Number of obs                 | = | 121    |
|                     |              | Average RVI                   | = | 0.0050 |
|                     |              | Largest FMI                   | = | 0.0353 |
|                     |              | Complete DF                   | = | 110    |
| DF adjustment: S    | Small sample | DF: min                       | = | 101.35 |
|                     |              | avg                           | = | 107.20 |
|                     |              | max                           | = | 108.01 |
| Model F test:       | Equal FMI    | F( <b>10</b> , <b>108.0</b> ) | = | 0.68   |
| Within VCE type:    | OLS          | Prob > F                      | = | 0.7442 |
|                     |              |                               |   |        |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | .6441998    | .8421386  | 0.76  | 0.446 | -1.025068  | 2.313468  |
| Sex          | 2868418     | 1.046655  | -0.27 | 0.785 | -2.361521  | 1.787838  |
| w1Age        | .0671057    | .0509766  | 1.32  | 0.191 | 0339386    | .16815    |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 1.339998    | .9136191  | 1.47  | 0.145 | 470986     | 3.150981  |
| TIME_V1SCAN  | .0000231    | .0005814  | 0.04  | 0.968 | 0011294    | .0011757  |
| w1BMI        | .0427979    | .0612694  | 0.70  | 0.486 | 0786528    | .1642487  |
| w1TotalD     | .003043     | .0378453  | 0.08  | 0.936 | 0720287    | .0781146  |
| w1Albumin    | 1.555542    | 1.529917  | 1.02  | 0.312 | -1.477257  | 4.588342  |
| w1EosinPct   | .0746184    | .1881876  | 0.40  | 0.693 | 29841      | .4476468  |
| ICV_volM2    | 3.19e-06    | 3.48e-06  | 0.92  | 0.361 | -3.70e-06  | .0000101  |
| _cons        | -13.19194   | 9.694003  | -1.36 | 0.176 | -32.40815  | 6.02427   |
|              |             |           |       |       |            |           |

497 . save, replace

file finaldata\_imputed.dta saved

Multiple-imputation estimates

498 .

499

500 . \*\*\*\*\*\*\*\*\*INTERACTION by Race\*\*\*\*\*\*\*\*

1584.182

\_cons

560.0287

2.83 0.006

467.8923

2700.471

501 .

502 .

503 . //ANALYSIS B//

504 . mi estimate: reg Left\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1E

Imputations

| Multiple-imputat  | cion escimaces |           |       | Tillbucaci | LUIIS  | -     | •         |
|-------------------|----------------|-----------|-------|------------|--------|-------|-----------|
| Linear regression | on             |           |       | Number o   | of obs | =     | 213       |
| · ·               |                |           |       | Average    | RVI    | =     | 0.0777    |
|                   |                |           |       | Largest    |        | =     | 0.2495    |
|                   |                |           |       | Complete   |        | =     | 200       |
| DF adjustment:    | Small sample   | •         |       | DF:        | min    | =     | 51.07     |
|                   | - · · · · ·    |           |       |            | avg    | =     | 146.85    |
|                   |                |           |       |            | max    | =     | 197.89    |
| Model F test:     | Equal FMI      |           |       | F( 12,     | 192.7) | =     | 13.94     |
| Within VCE type:  | : OLS          | ;         |       | Prob > F   | : ´    | =     | 0.0000    |
| <b>71</b>         |                |           |       |            |        |       |           |
| Left_Hippoca~s    | Coefficient    | Std. err. | t     | P> t       | [95%   | conf. | interval] |
| LnNFLw3           | -148.1326      | 57.23751  | -2.59 | 0.010      | -261.  | 0204  | -35.24479 |
| Race              |                |           |       |            |        |       |           |
| AfrAm             | -190.3188      | 167.2661  | -1.14 | 0.257      | -520.  | 2095  | 139.572   |
|                   |                | _0,,0_    |       |            |        |       |           |
| Race#c.LnNFLw3    |                |           |       |            |        |       |           |
| AfrAm             | 58.09044       | 71.98682  | 0.81  | 0.421      | -83.8  | 7781  | 200.0587  |
|                   |                |           |       |            |        |       |           |
| Sex               | -40.09592      | 56.72699  | -0.71 | 0.481      | -15    | 1.97  | 71.77816  |
| w1Age             | -3.380375      | 2.665286  | -1.27 | 0.206      | -8.63  | 6613  | 1.875863  |
| Race              | 0              | (omitted) |       |            |        |       |           |
| PovStat           | -97.85626      | 48.38187  | -2.02 | 0.044      | -193.  | 2707  | -2.441814 |
| TIME_V1SCAN       | 0026237        | .0334381  | -0.08 | 0.938      | 068    | 5765  | .0633291  |
| w1BMI             | .4548504       | 3.747677  | 0.12  | 0.904      | -7.05  | 3217  | 7.962918  |
| w1TotalD          | 3693844        | 2.603624  | -0.14 | 0.888      | -5.59  | 6214  | 4.857445  |
| w1Albumin         | 63.62493       | 86.60413  | 0.73  | 0.465      | -109.  | 5395  | 236.7893  |
| w1EosinPct        | 0996357        | 11.41915  | -0.01 | 0.993      | -22.7  | 4057  | 22.54129  |
| ICV_volM2         | .0017888       | .0002024  | 8.84  | 0.000      | .001   | 3897  | .0021879  |
|                   |                |           |       |            |        |       |           |

505 . mi estimate: reg Right\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1

|                  | Multiple-imputation estimates<br>Linear regression |           |       |              | ions<br>of obs<br>RVI<br>FMI | =<br>=<br>= | 5<br>213<br>0.0696<br>0.2571 |
|------------------|--|-----------|-------|--------------|------------------------------|-------------|------------------------------|
| DF adjustment:   | Small sample                                       | <b>!</b>  |       | Complete DF: |                              | = =         | 200<br>49.02                 |
|                  |  |           |       |              | avg                          | =           | 149.31                       |
|                  |  |           |       | _,           | max                          | =           | 197.56                       |
| Model F test:    | Equal FMI  |           |       | F( 12,       | ,                            | =           | 16.08                        |
| Within VCE type: | : OLS  | į         |       | Prob > 1     | -                            | =           | 0.0000                       |
| Right_Hippoc~s   | Coefficient  | Std. err. | t     | P> t         | [95%                         | conf.       | interval]                    |
| LnNFLw3          | -86.54133  | 59.47469  | -1.46 | 0.147        | -203.                        | 8442        | 30.76154                     |
| Race             |  |           |       |              |                              |             |                              |
| AfrAm            | -133.9905  | 174.5668  | -0.77 | 0.444        | -478.                        | 3395        | 210.3586                     |
| Race#c.LnNFLw3   |  |           |       |              |                              |             |                              |
| AfrAm            | 23.64295   | 74.93432  | 0.32  | 0.753        | -124.                        | 1477        | 171.4335                     |
| Sex              | -83.88428  | 59.17952  | -1.42 | 0.158        | -200.                        | 6106        | 32.842                       |
| w1Age            | -2.899276  | 2.761891  | -1.05 | 0.295        | -8.34                        | 5848        | 2.547296                     |
| Race             | 0  | (omitted) |       |              |                              |             |                              |
| PovStat          | -84.29094  | 50.13407  | -1.68 | 0.094        | -183.                        |             | 14.57569                     |
| TIME_V1SCAN      | .0096711   | .0346045  | 0.28  | 0.780        | 058                          |             | .0779181                     |
| w1BMI            | .1261101   | 3.94298   | 0.03  | 0.975        | -7.79                        |             | 8.049759                     |
| w1TotalD         | -2.676906  | 2.466681  | -1.09 | 0.280        | -7.55                        |             | 2.197775                     |
| w1Albumin        | .0331382   | 90.11204  | 0.00  | 1.000        | -180.                        | _           | 180.2922                     |
| w1EosinPct       | 4.727913   | 12.31299  | 0.38  | 0.702        | -19.8                        |             | 29.3029                      |
| ICV_volM2        | .002158  | .0002108  | 10.24 | 0.000        | .001                         | _           | .0025737                     |
| _cons            | 1571.443   | 588.6084  | 2.67  | 0.010        | 395.                         | 3001        | 2747.586                     |

| Multiple-imputat Linear regression  DF adjustment: | Imputations Number of obs Average RVI Largest FMI Complete DF DF: min |                     |               | =<br>=<br>=<br>= | 5<br>209<br>0.0582<br>0.3077<br>196<br>37.57 |       |                      |
|--|---|---------------------|---------------|------------------|--|-------|----------------------|
| Di adjustment.                                     | Small sample  |                     |               |                  | avg  | =     | 161.53               |
|  |   |                     |               |                  | nax  | =     | 193.52               |
| Model F test:                                      | Equal FMI   |                     |               | F( 12,           | 190.9)                                       | =     | 0.92                 |
| Within VCE type:                                   | : OLS   |                     |               | Prob > F         |  | =     | 0.5252               |
| LnLesion_Vol~e                                     | Coefficient   | Std. err.           | t             | P> t             | [95%   | conf. | interval]            |
| LnNFLw3  | .5008061  | .7880189            | 0.64          | 0.526            | -1.05  | 3517  | 2.05513              |
| Race<br>AfrAm                                      | 1.594102  | 2.282194            | 0.70          | 0.486            | -2.90  | 7397  | 6.095601             |
| Race#c.LnNFLw3<br>AfrAm                            | 2972111   | .9876069            | -0.30         | 0.764            | -2.24!                                       | 5119  | 1.650697             |
| Sex<br>w1Age                                       | 0375505<br>.0787186   | .7764759<br>.036571 | -0.05<br>2.15 | 0.961<br>0.033   | -1.569<br>.006                               |       | 1.494265<br>.1508478 |

<sup>507 . //</sup>ANALYSIS C//

<sup>508 .</sup> mi estimate: reg LnLesion\_Volume c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1TotalD w1Albumin w1Eo

| Race        | 0        | (omitted) |       |       |           |          |
|-------------|----------|-----------|-------|-------|-----------|----------|
| PovStat     | .1790051 | .6593589  | 0.27  | 0.786 | -1.121452 | 1.479462 |
| TIME_V1SCAN | 0000502  | .0004483  | -0.11 | 0.911 | 0009344   | .000834  |
| w1BMI       | .0386314 | .0531442  | 0.73  | 0.472 | 0689942   | .1462571 |
| w1TotalD    | .0202413 | .0319403  | 0.63  | 0.527 | 0428313   | .083314  |
| w1Albumin   | 1.192804 | 1.130494  | 1.06  | 0.294 | -1.047003 | 3.432611 |
| w1EosinPct  | .1345159 | .1515756  | 0.89  | 0.376 | 165242    | .4342737 |
| ICV_volM2   | 1.53e-06 | 2.74e-06  | 0.56  | 0.576 | -3.87e-06 | 6.93e-06 |
| _cons       | -8.85183 | 7.346463  | -1.20 | 0.231 | -23.40102 | 5.697359 |
|             |          |           |       |       |           |          |
|             |          |           |       |       |           |          |

510 . save, replace

file finaldata\_imputed.dta saved

512 . \*\*\*\*\*\*\*\*MODEL 6: MODEL 2+lifestyle/health-related factors\*\*\*\*\*\*

513 .

514 . //AFRICAN-AMERICAN//

515 .

516 . use finaldata\_imputed,clear

517 . 518 .

519 .

520 .

521 . //ANALYSIS B//

\_cons

522 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputation estimates  | Imputations   | = | 5      |
|--------------------------------|---------------|---|--------|
| Linear regression              | Number of obs | = | 90     |
|                                | Average RVI   | = | 0.0814 |
|                                | Largest FMI   | = | 0.4809 |
|                                | Complete DF   | = | 80     |
| DF adjustment: Small sample    | DF: min       | = | 14.63  |
|                                | avg           | = | 69.77  |
|                                | max           | = | 77.94  |
| Model F test: <b>Equal FMI</b> | F( 9, 76.2)   | = | 6.96   |
| Within VCE type: OLS           | Prob > F      | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -87.19164   | 52.63951  | -1.66 | 0.102 | -192.0205  | 17.63719  |
| Sex          | 15.25538    | 80.99892  | 0.19  | 0.851 | -146.0364  | 176.5472  |
| w1Age        | -5.74178    | 3.845661  | -1.49 | 0.140 | -13.40054  | 1.916985  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -171.2276   | 70.42902  | -2.43 | 0.017 | -311.4428  | -31.0124  |
| TIME V1SCAN  | .0053489    | .0518262  | 0.10  | 0.918 | 0978325    | .1085302  |
| w1BMI        | -5.413891   | 6.232742  | -0.87 | 0.399 | -18.72776  | 7.899981  |
| w1currdrugs  | -61.61121   | 68.11587  | -0.90 | 0.369 | -197.4099  | 74.18749  |
| w1SRH        | -14.38815   | 38.88681  | -0.37 | 0.712 | -91.81344  | 63.03713  |
| ICV_volM2    | .0016896    | .000337   | 5.01  | 0.000 | .0010186   | .0023606  |

4.77 0.000

1234.239

3005.756

2119.997 444.1749

523 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imput | es           |           | Imputat | ions    | =      | 5     |           |
|----------------|--------------|-----------|---------|---------|--------|-------|-----------|
| Linear regress | sion         |           |         | Number  | of obs | =     | 90        |
|                |              |           |         | Average | RVI    | =     | 0.0963    |
|                |              |           |         | Largest | FMI    | =     | 0.5354    |
|                |              |           |         | Complet | e DF   | =     | 80        |
| DF adjustment: | : Small samp | le        |         | DF:     | min    | =     | 12.24     |
| -              | ·            |           |         |         | avg    | =     | 69.48     |
|                |              |           |         |         | max    | =     | 77.91     |
| Model F test:  | MI           |           | F( 9,   | 75.6)   | =      | 7.41  |           |
| Within VCE typ | oe: C        | LS        |         | Prob >  | F      | =     | 0.0000    |
|                |              |           |         |         |        |       |           |
| Right_Hipp~s   | Coefficient  | Std. err. | t       | P> t    | [95%   | conf. | interval] |
| LnNFLw3        | -59.20969    | 52.56775  | -1.13   | 0.264   | -163.9 | 005   | 45.48112  |
| Sex            | -16.77893    | 80.92051  | -0.21   | 0.836   | -177.9 | 246   | 144.3667  |
| w1Age          | -6.320528    | 3.84011   | -1.65   | 0.104   | -13.96 | 858   | 1.327524  |
| Race           | 0            | (omitted) |         |         |        |       |           |
| PovStat        | -161.8429    | 70.27892  | -2.30   | 0.024   | -301   | .76   | -21.92593 |
| TIME_V1SCAN    | .0173355     | .0517173  | 0.34    | 0.738   | 0856   | 297   | .1203006  |
| w1BMI          | -6.155502    | 6.506755  | -0.95   | 0.362   | -20.30 | 149   | 7.990486  |
| w1currdrugs    | -74.37055    | 67.34404  | -1.10   | 0.273   | -208.5 | 356   | 59.79455  |
| w1SRH          | -1.139316    | 38.82785  | -0.03   | 0.977   | -78.44 | 948   | 76.17085  |
| ICV_volM2      | .0018969     | .0003364  | 5.64    | 0.000   | .0012  | 272   | .0025665  |
| cons           | 2095.943     | 446.0741  | 4.70    | 0.000   | 1205.  | 808   | 2986.078  |

525 . //ANALYSIS C//

Multiple-imputation estimates

526 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if R

Imputations

| Linear regress | sion         |           |       | Number o      | of obs =        | 88          |
|----------------|--------------|-----------|-------|---------------|-----------------|-------------|
|                |              |           |       | Average       | RVI =           | 0.1467      |
|                |              |           |       | Largest       | FMI =           | 0.5466      |
|                |              |           |       | Complete      | e DF =          | 78          |
| DF adjustment  | : Small samp | le        |       | DF:           | min =           | 11.72       |
|                |              |           |       |               | avg =           | 62.18       |
|                |              |           |       |               | max =           | 75.85       |
| Model F test:  | Equal F      | MI        |       | F( <b>9</b> , | <b>71.</b> 3) = | 1.01        |
| Within VCE typ | pe: O        | LS        |       | Prob > F      | =               | 0.4384      |
|                |              |           |       |               |                 |             |
| LnLesion_V~e   | Coefficient  | Std. err. | t     | P> t          | [95% conf       | . interval] |
| LnNFLw3        | .0721262     | .7613145  | 0.09  | 0.925         | -1.444987       | 1.58924     |
| Sex            | .1762242     | 1.168247  | 0.15  | 0.881         | -2.151167       | 2.503616    |
| w1Age          | .0801304     | .0553385  | 1.45  | 0.152         | 030165          | .1904259    |
| Race           | 0            | (omitted) |       |               |                 |             |
| PovStat        | -1.136665    | 1.012666  | -1.12 | 0.265         | -3.153628       | .8802986    |
| TIME_V1SCAN    | 0001545      | .0007395  | -0.21 | 0.835         | 0016275         | .0013184    |
| w1BMI          | .0235022     | .0940622  | 0.25  | 0.807         | 1819804         | .2289847    |
| w1currdrugs    | 1619498      | 1.199817  | -0.13 | 0.894         | -2.679275       | 2.355376    |
| w1SRH          | 8667919      | .5552508  | -1.56 | 0.123         | -1.972869       | .2392854    |
| ICV_volM2      | 2.56e-06     | 4.87e-06  | 0.53  | 0.601         | -7.14e-06       | .0000123    |
| _cons          | 1.585352     | 6.313876  | 0.25  | 0.802         | -11.0066        | 14.1773     |
|                |              |           |       |               |                 |             |

```
527 .
528 . save, replace
   file finaldata_imputed.dta saved
529 .
530 .
531 .
532 . //WHITES//
533 .
534 . use finaldata_imputed,clear
535 .
536 .
537 .
```

538 . //ANALYSIS B//

539 . mi estimate: reg Left\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputation estimates Imputations |                      |   | 5      |
|---|----------------------|---|--------|
| Linear regression                         | Number of obs        | = | 123    |
|   | Average RVI          | = | 0.0051 |
|   | Largest FMI          | = | 0.0430 |
|   | Complete DF          | = | 113    |
| DF adjustment: Small sample               | DF: min              | = | 101.86 |
|   | avg                  | = | 110.00 |
|   | max                  | = | 111.04 |
| Model F test: <b>Equal FMI</b>            | F( <b>9, 111.0</b> ) | = | 10.09  |
| Within VCE type: OLS                      | Prob > F             | = | 0.0000 |

| Left_Hippo~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -148.3197   | 62.48762  | -2.37 | 0.019 | -272.1429  | -24.49656 |
| Sex          | -72.40147   | 76.94867  | -0.94 | 0.349 | -224.8818  | 80.07886  |
| w1Age        | -1.559473   | 3.789944  | -0.41 | 0.682 | -9.069509  | 5.950564  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | -20.69627   | 70.87215  | -0.29 | 0.771 | -161.1354  | 119.7429  |
| TIME_V1SCAN  | 0089965     | .0442792  | -0.20 | 0.839 | 0967397    | .0787466  |
| w1BMI        | 4.731178    | 4.537579  | 1.04  | 0.299 | -4.26058   | 13.72294  |
| w1currdrugs  | 49.0725     | 84.76209  | 0.58  | 0.564 | -119.0555  | 217.2005  |
| w1SRH        | 22.53357    | 38.13462  | 0.59  | 0.556 | -53.03244  | 98.09959  |
| ICV_volM2    | .0019429    | .0002657  | 7.31  | 0.000 | .0014163   | .0024695  |
| _cons        | 1330.61     | 444.5569  | 2.99  | 0.003 | 449.6651   | 2211.555  |

540 . mi estimate: reg Right\_Hippocampus LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if

| Multiple-imputati | ion estimates | Imputations          | = | 5      |
|-------------------|---------------|----------------------|---|--------|
| Linear regression |               | Number of obs        | = | 123    |
|                   |               | Average RVI          | = | 0.0060 |
|                   |               | Largest FMI          | = | 0.0447 |
|                   |               | Complete DF          | = | 113    |
| DF adjustment:    | Small sample  | DF: min              | = | 101.34 |
|                   |               | avg                  | = | 109.71 |
|                   |               | max                  | = | 111.03 |
| Model F test:     | Equal FMI     | F( 9, <b>111.0</b> ) | = | 11.90  |
| Within VCE type:  | OLS           | Prob > F             | = | 0.0000 |

| Right_Hipp~s | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval] |
|--------------|-------------|-----------|-------|-------|------------|-----------|
| LnNFLw3      | -92.80683   | 65.72525  | -1.41 | 0.161 | -223.0461  | 37.43248  |
| Sex          | -134.8862   | 80.91626  | -1.67 | 0.098 | -295.2285  | 25.45604  |
| w1Age        | 1573398     | 3.985997  | -0.04 | 0.969 | -8.05589   | 7.741211  |
| Race         | 0           | (omitted) |       |       |            |           |
| PovStat      | 7.171321    | 74.53982  | 0.10  | 0.924 | -140.5361  | 154.8788  |
| TIME V1SCAN  | .0221674    | .0465525  | 0.48  | 0.635 | 07008      | .1144148  |
| w1BMI        | 6.375049    | 4.795875  | 1.33  | 0.187 | -3.130069  | 15.88017  |
| w1currdrugs  | 38.40138    | 89.21136  | 0.43  | 0.668 | -138.5627  | 215.3655  |
| w1SRH        | 4.670899    | 40.10404  | 0.12  | 0.907 | -74.79769  | 84.13949  |
| ICV volM2    | .0024046    | .0002795  | 8.60  | 0.000 | .0018507   | .0029585  |
| _cons        | 790.12      | 468.6843  | 1.69  | 0.095 | -138.7042  | 1718.944  |

542 . //ANALYSIS C//

543 . mi estimate: reg LnLesion\_Volume LnNFLw3 Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_volM2 if R

| Multiple-impu    | tation estimates |       | Imputat       | ions   | =         | 5        |
|------------------|------------------|-------|---------------|--------|-----------|----------|
| Linear regres    |                  |       | Number of obs |        |           | 121      |
| •                |                  |       | Average       | RVI    | =         | 0.0042   |
|                  |                  |       | Largest       | FMI    | =         | 0.0338   |
|                  |                  |       | Complet       | e DF   | =         | 111      |
| DF adjustment    | : Small sample   |       | DF:           | min    | =         | 102.66   |
| •                | ·                |       |               | avg    | =         | 108.35   |
|                  |                  |       |               | max    | =         | 109.05   |
| Model F test:    | Equal FMI        |       | F( 9,         | 109.0  | ) =       | 0.68     |
| Within VCE ty    | oe: OLS          |       | Prob >        | F      | =         | 0.7220   |
| <br>LnLesion_V~e | t                | P> t  | [95%          | conf.  | interval] |          |
| LnNFLw3          | .5446115 .838675 | 0.65  | 0.517         | -1.117 | 7608      | 2.206831 |
| Sex              | 0179147 1.006461 | -0.02 | 0.986         | -2.012 | 2682      | 1.976853 |
| w1Age            | 1.16             | 0.247 | 0418          | 3033   | .160604   |          |
| Daga             |                  |       |               |        |           |          |

| LnLesion_V~e | Coefficient | Std. err. | t     | P> t  | [95% conf. | interval |
|--------------|-------------|-----------|-------|-------|------------|----------|
| LnNFLw3      | .5446115    | .838675   | 0.65  | 0.517 | -1.117608  | 2.206831 |
| Sex          | 0179147     | 1.006461  | -0.02 | 0.986 | -2.012682  | 1.976853 |
| w1Age        | .0594003    | .0510621  | 1.16  | 0.247 | 0418033    | .160604  |
| Race         | 0           | (omitted) |       |       |            |          |
| PovStat      | 1.175133    | .932822   | 1.26  | 0.210 | 673681     | 3.023946 |
| TIME_V1SCAN  | 0000297     | .0005777  | -0.05 | 0.959 | 0011747    | .0011152 |
| w1BMI        | .0152453    | .0596018  | 0.26  | 0.799 | 1028839    | .1333745 |
| w1currdrugs  | 5275723     | 1.102852  | -0.48 | 0.633 | -2.714906  | 1.659762 |
| w1SRH        | 2913732     | .5026866  | -0.58 | 0.563 | -1.287679  | .7049329 |
| ICV_volM2    | 2.62e-06    | 3.47e-06  | 0.76  | 0.451 | -4.25e-06  | 9.50e-06 |
| _cons        | -3.289228   | 5.807622  | -0.57 | 0.572 | -14.8      | 8.221543 |

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545 . save, replace

file finaldata\_imputed.dta saved

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551 . //ANALYSIS B//

Multiple-imputation estimates

552 . mi estimate: reg Left\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_v

Imputations

| Linear regression |              | Number of obs = Average RVI = |       |         | 213<br>0.0248 |       |           |
|-------------------|--------------|-------------------------------|-------|---------|---------------|-------|-----------|
|                   |              |                               |       | Largest |               | =     | 0.2012    |
|                   |              |                               |       | Complet |               | =     | 201       |
| DF adjustment:    | Small sample | <u> </u>                      |       | DF:     | min           | =     | 67.49     |
|                   |              |                               |       |         | avg           | =     | 183.44    |
|                   |              |                               |       |         | max           | =     | 199.00    |
| Model F test:     | Equal FMI    |                               |       | F( 11,  | 198.3)        | =     | 15.97     |
| Within VCE type:  | •            |                               |       | Prob >  | ,             | =     | 0.0000    |
| -                 |              |                               |       |         |               |       |           |
| Left_Hippoca~s    | Coefficient  | Std. err.                     | t     | P> t    | [95%          | conf. | interval] |
| LnNFLw3           | -151.8493    | 56.87893                      | -2.67 | 0.008   | -264.         | 0186  | -39.67995 |
| Race              |              |                               |       |         |               |       |           |
| AfrAm             | -204.1951    | 162.7964                      | -1.25 | 0.211   | -525          | . 224 | 116.8339  |
| AIIAIII           | -204.1331    | 102.7504                      | 1.23  | 0.211   | -323          | . 227 | 110.0555  |
| Race#c.LnNFLw3    |              |                               |       |         |               |       |           |
| AfrAm             | 65.63982     | 71.22578                      | 0.92  | 0.358   | -74.8         | 1597  | 206.0956  |
|                   |              |                               |       |         |               |       |           |
| Sex               | -32.3671     | 55.40964                      | -0.58 | 0.560   | -141.         | 6367  | 76.90255  |
| w1Age             | -3.645663    | 2.654481                      | -1.37 | 0.171   | -8.           | 8802  | 1.588875  |
| Race              | 0            | (omitted)                     |       |         |               |       |           |
| PovStat           | -98.19598    | 48.57639                      | -2.02 | 0.045   | -193.         | 9871  | -2.40488  |
| TIME_V1SCAN       | 0068093      | .0328918                      | -0.21 | 0.836   | 071           | 6706  | .058052   |
| w1BMI             | 1890762      | 3.583792                      | -0.05 | 0.958   | -7.34         | 1405  | 6.963253  |
| w1currdrugs       | -7.372719    | 53.5105                       | -0.14 | 0.891   | -113.         | 0372  | 98.29172  |
| w1SRH             | 2.036576     | 26.70682                      | 0.08  | 0.939   | -50.6         | 2812  | 54.70127  |
| ICV_volM2         | .0017742     | .0002029                      | 8.74  | 0.000   | .001          | 3741  | .0021743  |
| _cons             | 1905.243     | 321.8969                      | 5.92  | 0.000   | 1270          | .163  | 2540.323  |

553 . mi estimate: reg Right\_Hippocampus c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_

| Multiple-imputat        | Multiple-imputation estimates |           |       |                | Imputations |       |           |  |
|-------------------------|-------------------------------|-----------|-------|----------------|-------------|-------|-----------|--|
| Linear regression       | n                             |           |       | Number o       | of obs      | =     | 213       |  |
|                         |                               |           |       | Average        | RVI         | =     | 0.0245    |  |
|                         |                               |           |       | Largest        | FMI         | =     | 0.2183    |  |
|                         |                               |           |       | Complete       | DF          | =     | 201       |  |
| DF adjustment:          | Small sample                  |           |       | DF:            | min         | =     | 61.01     |  |
|                         |                               |           |       |                | avg         | =     | 184.84    |  |
|                         |                               |           |       |                | max         | =     | 199.02    |  |
| Model F test:           | Equal FMI                     |           |       | F( <b>11</b> , | 198.3)      | =     | 18.21     |  |
| Within VCE type:        | OLS                           |           |       | Prob > F       | =           | =     | 0.0000    |  |
| Right_Hippoc~s          | Coefficient                   | Std. err. | t     | P> t           | [95%        | conf. | interval] |  |
| LnNFLw3                 | -90.05859                     | 59.16448  | -1.52 | 0.130          | -206.       | 7363  | 26.61913  |  |
| Race<br>AfrAm           | -112.6749                     | 169.2704  | -0.67 | 0.506          | -446.       | 4706  | 221.1208  |  |
| Race#c.LnNFLw3<br>AfrAm | 26.65382                      | 74.06117  | 0.36  | 0.719          | -119.       | 3935  | 172.7012  |  |
| Sex                     | -82.09158                     | 57.61156  | -1.42 | 0.156          | -195.       | 7035  | 31.52039  |  |

| w1Age       | -3.273106 | 2.759585  | -1.19 | 0.237 | -8.714897 | 2.168685 |
|-------------|-----------|-----------|-------|-------|-----------|----------|
| Race        | 0         | (omitted) |       |       |           |          |
| PovStat     | -80.03161 | 50.48973  | -1.59 | 0.115 | -179.5954 | 19.53214 |
| TIME_V1SCAN | .014484   | .0342094  | 0.42  | 0.672 | 0529757   | .0819437 |
| w1BMI       | .3261312  | 3.761042  | 0.09  | 0.931 | -7.1945   | 7.846762 |
| w1currdrugs | -23.96903 | 54.76901  | -0.44 | 0.662 | -132.0135 | 84.07545 |
| w1SRH       | -4.568413 | 27.76623  | -0.16 | 0.869 | -59.32219 | 50.18536 |
| ICV_volM2   | .002149   | .000211   | 10.19 | 0.000 | .001733   | .0025651 |
| _cons       | 1542.423  | 334.8339  | 4.61  | 0.000 | 881.8041  | 2203.042 |

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555 . //ANALYSIS C//

Multiple-imputation estimates

556 . mi estimate: reg LnLesion\_Volume c.LnNFLw3##Race Sex w1Age Race PovStat TIME\_V1SCAN w1BMI w1currdrugs w1SRH ICV\_vo

Imputations

| Multiple-imputation estimates |   |   |   |   | -  | -   |
|-------------------------------|---|---|---|---|--|---|
| Linear regression             |   |   |   | Number of obs   |  |   |
|                               |   |   | Average   | RVI   | =  | 0.0718  |
|                               |   |   | Largest   | FMI   | =  | 0.3382  |
|                               |   |   |   |   | =  | 197   |
| Small sample                  | 2   |   | DF:   | min   | =  | 32.51   |
|                               |   |   |   | avg   | =  | 164.04  |
|                               |   |   |   | max   | =  | 194.78  |
| Equal FM1                     | [   |   | F( 11,  | 190.0)  | =  | 1.03  |
| : OLS                         | ;   |   | Prob > F  |   | =  | 0.4186  |
|                               |   |   |   |   |  |   |
| Coefficient                   | Std. err.   | t   | P> t  | [95%  | conf.  | interval]   |
| .4119713                      | .7839072  | 0.53  | 0.600   | -1.13   | 4198   | 1.958141  |
|                               |   |   |   |   |  |   |
|                               |   |   |   |   |  |   |
| 1.118762                      | 2.223193  | 0.50  | 0.615   | -3.26   | 5859   | 5.503384  |
|                               |   |   |   |   |  |   |
|                               |   |   |   |   |  |   |
| 2019185                       | .9792897  | -0.21   | 0.837   | -2.13   | 3328   | 1.729491  |
| .1844201                      | .751004   | 0.25  | 0.806   | -1.29   | 6884   | 1.665724  |
| .0765423                      | .03641  | 2.10  | 0.037   | .00   | 4732   | .1483525  |
| 0                             | (omitted)   |   |   |   |  |   |
| 0028986                       | .6605833  | -0.00   | 0.997   | -1.30   | 5747   | 1.29995   |
| 0000766                       | .0004418  | -0.17   | 0.863   | 00  | 0948   | .0007948  |
| .0150887                      | .0523412  | 0.29  | 0.775   | 09  | 1461   | .1216384  |
|                               | 0040404   | -0.34   | 0.733   | -1.95   | 9491   | 1.391584  |
| 2839534                       | .8268681  | -0.34   | 0.,55   |   |  |   |
| 2839534<br>5899437            | .8268681<br>.360704   | -1.64   |   | -1.30   |  | .1214463  |
|                               |   |   | 0.104   | -1.30<br>-3.54  | 1334   | .1214463<br>7.22e-06  |
|                               | Equal FM1: OLS  Coefficient .4119713  1.1187622019185 .1844201 .0765423 000289860000766 | Small sample  Equal FMI : OLS  Coefficient Std. err.  .4119713 .7839072  1.118762 2.223193 2019185 .9792897  .1844201 .751004 .0765423 .03641 0 (omitted)0028986 .66058330000766 .0004418 | Small sample  Equal FMI : OLS  Coefficient Std. err. t  .4119713 .7839072 0.53  1.118762 2.223193 0.50 2019185 .9792897 -0.21  .1844201 .751004 0.25 .0765423 .03641 2.10 0 (omitted)0028986 .6605833 -0.000000766 .0004418 -0.17 | Number of Average Largest Complete DF:  Equal FMI F( 11, Prob > F  Coefficient Std. err. t P> t   .4119713 .7839072 0.53 0.600  1.118762 2.223193 0.50 0.615 2019185 .9792897 -0.21 0.837  .1844201 .751004 0.25 0.806 .0765423 .03641 2.10 0.037 0 (omitted)0028986 .6605833 -0.00 0.9970000766 .0004418 -0.17 0.863 | Number of obs<br>Average RVI<br>Largest FMI<br>Complete DF<br>DF: min<br>avg<br>max<br>Equal FMI F( 11, 190.0)<br>Prob > F  Coefficient Std. err. t P> t  [95%<br>.4119713 .7839072 0.53 0.600 -1.13<br>1.118762 2.223193 0.50 0.615 -3.26<br>2019185 .9792897 -0.21 0.837 -2.13<br>.1844201 .751004 0.25 0.806 -1.29<br>.0765423 .03641 2.10 0.037 .00<br>0 (omitted)<br>0028986 .6605833 -0.00 0.997 -1.30<br>0000766 .0004418 -0.17 0.86300 | Number of obs = Average RVI = Largest FMI = Complete DF = DF: min = avg = max = Equal FMI |

557 .

558 . save, replace

file finaldata\_imputed.dta saved

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564 . capture log close