sort ID Time

Make a scatter plot

`. graph CD4 Time, s(.) xlab ylab rlabel`

Draw a line graph, connect the points for each individual with increasing time

`. graph CD4 Time, c(L) s(i) xlab ylab`
Since the plot looks noisy let’s just plot the deciles.

. sort   ID Time
. gen first = ID != ID[_n-1]
. browse
. gen second = ID != ID[_n-2]
. browse
. sort first CD4
. browse
. gen decile = first & (int(_n/37) ==_n/37)
. sort   ID Time
. browse
. drop second
. browse
. replace decile = decil[_n-1] if ID == ID[_n-1]
(73 real changes made)
. gen count = CD4 if decile
(2293 missing values generated)

. graph CD4 count Time, c(.L) s(.i) xlab ylab pen(12)
Moving average

```
. ksm CD4 Time, linear bw(0.8) xlab ylab s(.) pen(12)
Running line smoother, bandwidth = .8
```

The lowess smoother

```
. ksm CD4 Time, lowess xlab ylab s(.i) pen(12)
Lowess smoother, bandwidth = .8
```
. exit, clear