

Rich Gruss  
In-Class 8-3

```
setwd('/Users/rgruss/git/CMDA/in_class/8')
load("fdata.RData")
attach(final)
model <- lm(ssc ~ som1 + som2 + som3 + som4 + som5 + som6 +
            som7 + som8 + som9 + som10 + som11 + som12 + som13 + som14 +
            age)
```

Residuals:

| Min     | 1Q      | Median  | 3Q     | Max    |
|---------|---------|---------|--------|--------|
| -4.0846 | -0.9373 | -0.2395 | 0.8615 | 5.1013 |

Coefficients:

|             | Estimate  | Std. Error | t value | Pr(> t )     |
|-------------|-----------|------------|---------|--------------|
| (Intercept) | 0.930604  | 0.501616   | 1.855   | 0.064525 .   |
| som1        | 0.204283  | 0.062278   | 3.280   | 0.001157 **  |
| som2        | 0.326182  | 0.064194   | 5.081   | 6.53e-07 *** |
| som3        | 0.243625  | 0.033742   | 7.220   | 4.11e-12 *** |
| som4        | 0.153274  | 0.046042   | 3.329   | 0.000978 *** |
| som5        | 0.166983  | 0.071151   | 2.347   | 0.019566 *   |
| som6        | 0.074954  | 0.083424   | 0.898   | 0.369641     |
| som7        | 0.100937  | 0.081050   | 1.245   | 0.213947     |
| som8        | -0.009423 | 0.176722   | -0.053  | 0.957510     |
| som9        | 0.123674  | 0.089830   | 1.377   | 0.169593     |
| som10       | 0.250056  | 0.073577   | 3.399   | 0.000767 *** |
| som11       | 0.179763  | 0.087164   | 2.062   | 0.040015 *   |
| som12       | 0.204114  | 0.059449   | 3.433   | 0.000678 *** |
| som13       | 0.403307  | 0.046264   | 8.717   | < 2e-16 ***  |
| som14       | 0.197416  | 0.054433   | 3.627   | 0.000336 *** |
| age         | -0.010667 | 0.016660   | -0.640  | 0.522476     |

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.533 on 307 degrees of freedom

Multiple R-squared: 0.7923, Adjusted R-squared: 0.7822

F-statistic: 78.08 on 15 and 307 DF, p-value: < 2.2e-16

Interpretation: R-squared of .7 indicates that 70% of the variance is explained in a linear model that includes all 14 somatic markers along with age. The most important explanatory variables for the ssc scores are som13, som3, and som2, each of which is positively related to ssc score.