ADNI Biostatistics Conference Call,
Minutes for October 5, 2010

Present on call: Danielle Harvey, Laurel Beckett, Arnold Huang, Bill Billings, Niklas Sjogren, Adam Schwarz, Mark Schmidt, Art Toga, David Shera, Fred Immermann, Alison Drone (FNIH), Nandini Raghavan.

The first topic raised is the possibility of a working group on "data", as raised at the ISAB (now PPSB). The question is whether there is a possibility of organizing and structuring an intermediate data structure. Art suggested that the group survey users and find out what the desires and needs are. Several possible prototypes were mentioned: CAMD has a common dataset, and there are some European prototypes in their initiatives. Other participants noted that there are some issues with the European database, too. It has some good features (ability to pick what you want to download via a web interface, and it creates a merged database to download.) But there may also be some limitations. Art notes that his group has been hamstrung for a while by the format of some of the non-imaging data submitted, but that has been fixed and it should be easier.

So far there is no leadership of the proposed group. The industry people will take this back to their group; Mark and Alison will take the lead, with Art, in putting together a committee, contacting users to assess needs and desires for data content and functionality.

Danielle reported that there is not much new data coming in yet. The imaging groups are finalizing forms for reporting the resting fMRI, the DTspin, and the new amyloid imaging. There will be new data starting to come in during the next six months. She is encouraging the labs to process the 24 and 36 month images that have been quality-controlled and made available through LONI, to give us data before the April steering committee meeting. We will probably have to give them a deadline. We are thinking sometime in January. The hope is to get more data made available.

The RBM plasma proteomic data are still in quality control, but will be posted as soon as QC is complete. Fred Immermann estimates that data will be posted within one month. The proteomic team will also release a "primer" or introduction to the database. The dataset will include measured levels of around 200 different proteins measured in plasma. The same panel of proteins will be analyzed from CSF samples.

We have ongoing data analysis with Mike Weiner on a major paper crossing all groups and looking at biomarker predictors of "change" (both cognitive change and incident AD). We are also looking at more complex analyses of imaging and of multiple markers.

Fred reported on the RBM statistical analysis plan. He is looking for comments on the plan. There are several different strategies proposed (machine learning, etc.) There will be univariate analyses of each protein and what influences it, then semi-separate efforts on multivariate class prediction Max Kuhn at Pfizer will lead this effort and plans to use a robust cross-validation approach as well as the training-set, test-set split proposed in the ADNI dataset. Comments on the plan should be sent to Fred by tomorrow.

Next call is November 2, 2010.