

ADNI Biostatistics Conference
3 April 2012

Present on call: Laurel Beckett, Danielle Harvey, Naomi Saito, Arnold Huang, Bill Billings, David Verbel, David Shera,

The New Orleans meetings are less than 3 weeks away. We had asked labs to have data by March 1 so we could have the presentations well underway by now. Danielle reported that a number of labs did in fact have summary data prepared and submitted to ADCS by March 1. But LONI has instituted a more stringent QC process that takes much longer for data to make it onto the public site. Data from Freesurfer at UCSF submitted mid-February just got posted last week, as did data from Utah submitted March 1. Another dataset from Banner, submitted in early March, is not yet available.

The MRI core has not submitted anything new other than Freesurfer; Nick Fox was going to submit something but it's not there yet. Paul Thompson has presented some results but the data have not been submitted yet. We are still awaiting additional data from the MRI core. We don't have data yet from the new sequences, either. Cliff Jack at Mayo is going to report "Stand scores" (an AD-like index from MRI) but these have not been posted yet either.

The CSF lab is doing a batch-processing run but they have not finished and have not posted data. They say they will be posting data but they may not be timely.

Thus we may not have a chance to see and analyze data before the Steering Committee meeting.

There are some changes in the ADNI-GO and ADNI-2, for example, new visit codes. They are still trying to work out the codes and get everything documented properly.

There are several groups trying to improve data tracking and documentation. One is a PPSB group, I think called the bioinformatics group. They are working on trying to make the database more user-friendly. They also want to identify places of confusion and places where we need more documentation. They meet once a month by phone, and LONI is often represented on those calls. There are several systems on LONI that are not live yet but will be soon, and will help data access and visualization.

Another group is LONI, core leaders, and others, trying to improve tracking of data and missing data. There has not been a unified system; ADCS has a system for tracking patients, but there is not a way to check what's going on if a scan is acquired but not posted yet, or posted but not out of the Mayo pre-processing yet. They are trying hard to get as much data available and to document reasons if something is missing.

What will in fact be presented in New Orleans: We will be presenting four main topics. First, we'll characterize the eMCI's and where they fall in the cross-sectional data relative to NC, MCI and AD. (So far they look just as you'd expect, in between NC and MCI, closer to NC on some and MCI on other measures.) We will also show the eMCI in the context of change. Some early looks at some clinical variables show the eMCI looking like the later years we have on the NC who converted. A second focus will be the AV45 data, using the Jagust lab global summary. We will look both at descriptive summaries across diagnoses, and at correlates with selected cross-sectional and

longitudinal data. Third, we'll report on some of the newly added clinical measures, such as the eCOG, a measure of ability to do everyday cognitive activities. Finally, we hope that Mike Donohue will be able to present some updates on implications for clinical trial design.

The MRI core is putting together frozen datasets from ADNI-1, primarily consisting of images themselves rather than summaries. The goal is to encourage researchers to make use of the frozen datasets rather than scattered subsets. They will also include links to cross-validation lists. The PET core is discussing doing something similar, if numbers are sufficient. Fewer people had PET to begin with, and there were more scanner changes, so numbers could be an issue.

We have reported on this call before; there was a meeting last year in Friday Harbor focused on ADNI. A special issue of *Brain Imaging and Behavior* will include a number of manuscripts resulting from this conference. We'll let the group know when it becomes available.

David Shera and possibly Bill Billings will also be in New Orleans, so we'll try to get together informally. If others will be there, please let Laurel or Danielle know by email.

Our next call will be Tuesday, 1 May, at the 10 AM Pacific time. Working statisticians of the world unite!